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ABSTRACT

The ten papers in this volume are largely revisions of papers presented at the Texas conference, held March 22-24, 1973. The first paper, "Against Universal Semantic Representation," by Gilbert Harman, argues against the need for (and the possibility of) a level of semantic representation in a theory of language. "Remarks on the Lexicography of Performative Verbs," by James D. McCawley, is primarily concerned with a characterization of performativity. "A Classification of Illocutionary Acts," by John R. Searle, sets up a classification scheme in terms of illocutionary acts, rather than illocutionary verbs. The next two papers, "Where to Do Things with Words," by John Robert Ross, and "Aspects of Linguistic Pragmatics," by Jerrold M. Sadock, concern themselves with the question of how to treat cases in which what a sentence might be said to mean is not what the speaker might be said to have meant. "What You Can Do with Words: Politeness, Pragmatics and Performatives," by Robin Lakoff, explores politeness in language. "Pragmatics in Natural Logic," by George Lakoff, shows how three pragmatic conerns (indexical elements, performatives and implicatures) can be incorporated into a generative semantics theory. The final three papers deal with the problems of presupposition: "Pragmatic Presuppositions," by Robert Stalnaker; "Presupposition and Linguistic Context," by Lauri Karttunen; and "Where Pragmatics Fits In," by Richard H. Thomason. Suggestions for further reading are appended. (Author/RM)

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PROCEEDINGS OF THE TEXAS CONFERENCE ON PERFORMATIVES, PRESUPPOSITIONS, AND IMPLICATURES

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Note of Appreciation

This volume originates from a Conference on Performances, Conversational Implicature, and Presuppositions, held March 22-24, 1973 at the University of Texas at Austin. The conference was sponsored by the university's College of Humanities, College of Social and Behavioral Sciences, and Comparative Studies Program; the Center for Applied Linguistics; and the American Council of Learned Societies. The organizers of the conference gratefully acknowledge the support of these sponsors and would also like to express their appreciation to the many people who helped make the conference possible, including Doug Browning, Bob Harms, and Rea Keast, at the time chairmen, respectively, of the Philosophy, Linguistics, and English Departments; James McKie, Dean of the College of Social and Behavioral Sciences; Stanley N. Werbow, Dean of the College of Humanities; Elspeth Rostow, Chairman of the Comparative Studies Program; and especially Jim Kaufman, Associate Dean of the College of Humanities, and Rudolph C. Troike, Director of the Center for Applied Linguistics, both of whose assistance, support, and encouragement were instrumental in bringing about the conference. We would also like to express our appreciation to Emmon Bach and Stan Peters, without whose help and advice we would have had no idea of how to put together another in the series of Texas conferences in linguistics.

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Andy Rogers
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Introduction

The papers in this volume are largely revisions* of papers presented at the Texas conference. Although the conference was on the announced topics of performatives, conversational implicature, and presupposition, as might have been expected the subjects dealt with were more diverse, including as well the question of universal semantic representation, politeness in language, and indexicals. In spite of the apparent diversity of questions raised and discussed, one generalization emerged from the bulk of the papers and discussion: that the study of pragmatics is essential to any complete and adequate theory of natural language.

In the opening paper, "Against Universal Semantic Representation," Gilbert Harman proposes a theory of language which, while it is intended to account for most of the language phenomena which most semantically-oriented contemporary linguists and philosopehrs have argued must be accounted for in a theory of language (such as implication, meaning relations among predicates, presuppositions, implicature, speech act phenomena, and syntax), differs significantly in several respects from current theories.

First, Harman's theory of language includes what he calls a theory of conceptual role. Harman claims that the meaning of a linguistic expression depends in part on its role in a conceptual scheme; that, for example, the expression *chemical substance* does not mean the same thing to a modern chemist that it does to a medieval alchemist, in part because the chemist and the alchemist have different concepts of chemistry. Harman proposes that a theory of language should include a theory of conceptual role to account for such facts, including the connections between language and other language, language and observation, language and behavior, and other similar phenomena. The connections between language and other language are to be described by implications among expressions in the language which, in Harman's system, are characterized by the interaction of grammar-assigned logical form, the logic, and the axioms of the language. Under the heading of the connections between language and observation, a theory of conceptual role should account for facts like a speaker's ability to apply the word *red* to perceived red objects, which, Harman claims, is part of the meaning of the word *red*, since a speaker who cannot appropriately apply expressions in his language to the world may well be said not to know what they mean. The connections between language and behavior include such things as the relationship between the meaning of

*We wish to thank Lauri Karttunen, Stan Peters, and Sue Schmerling for discussing various versions of parts of the introduction with us. The errors are, as usual, on us.

words like *harmful* and *dangerous* and the disposition to avoid situations which one would apply them to.

Second, in Harman's view a theory of language should not associate sentences with universal semantic representations; instead, something like the linguist's deep structure, containing language-specific predicates and modifiers, should serve as the interpreted logical form of sentences. He argues that some of "the thoughts that language encodes are themselves in language and have no existence apart from the language in question" and that they therefore ought to be represented in a language-particular way His claim is that the relationship between thought and language is not that language is some sort of coding system for the communication of prelinguistic thought, but that it is an additional system of representation for thought--that one thinks *in language*.[2]

Third, he makes an even stronger claim about the nature of meaning in language: that a theory of language *could not* relate sentences to universal semantic representations. The argument goes roughly as follows. The meaning of an expression does not stand by itself, but depends in part on its role in the conceptual system of which it is part, or its conceptual role. Given that different speakers have differing, sometimes incommensurable, conceptual schemata which the meaning of an expression may depend on, meanings within one schema may be incommensurable with meanings in another. This being the case, Harman argues, expressions understood in terms of different conceptual schemata cannot be translated into any supposedly universal representation without some loss of meaning, since, in order to preserve the meaning of the expression, the universal schema would have to contain incommensurable sets of conceptual roles. This, however, cannot be done without making the system inconsistent. It is not clear, however, as John Searle pointed out in the discussion of Harman's paper at the conference, that there could not be a universal metalanguage powerful enough to *describe* or *represent* incommensurable conceptual schemata; the inconsistency lies in simultaneously *accepting* or *believing* incommensurable theories.

Finally, Harman argues against truth-conditional semantics as an account of linguistic meaning. The point of his argument is that the reason we know the conditions under which a declarative sentence is true is not because that knowledge is or is part of the meaning of the sentence, but that our knowledge of a sentence's meaning enables us to determine its truth conditions by means of the redundancy theory of truth.

The next two papers, James McCawley's "Remarks on the Lexicography of Performative Verbs," and John Searle's "A Classification of Illocutionary Acts," are concerned with the typology of illocutionary acts and performative verbs. Obviously, the kind of system of classification and relationship one comes up with depends in part on the assumptions one makes about the nature of language and on the purpose of the classificatory system.

McCawley adopts a generative semantics framework and is primarily interested in a characterization of performativity. What is it that determines which verbs in a language can be used performatively? McCawley, since he is a generative semanticist, believes that one should be able to determine from the *meaning* of a verb whether or not it can be used performatively. He starts out by reviewing and refining Austin's (1962, 147-163) original five-way classification of performative verbs (Verdictives, Exercitives, Commissives, Behabitives, and Expositives), accepting Vendler's arguments for separating out Operatives ("acts by which the speaker makes something the case by saying that it is to be the case," such as appointing and excommunicating) from Austin's Exercitives, and dividing the remaining Exercitives into Imperatives and Advisories. McCawley takes it as evidence in favor of his revised classification that membership in each category corresponds to a consistent pattern of what would, for a generative semanticist, be called

syntactic behavior, namely, possibility of performative use in the passive, with *would like to, would, will,* and *let me.*

Having arrived at this tentative seven-way classification of performative verbs, he then goes on to attempt to roughly characterize each of the classes in terms of general semantic properties, from which one could predict, given the meaning of a performative verb, which class it should be belong to. McCawley then abstracts from the set of semantic characterizations of the individual classes to arrive at a tentative characterization of performativity in general. He concludes that performativity appears to be attributable to two different factors, the possession of either of which is sufficient for a verb to be used performatively. The characteristic common to Verdictives, Operatives, Imperatives, Advisories, and Commissives appears to be that they "all refer to a linguistic act and something that comes about as part of that act." On the other hand, Behabitives and Expositives, for the most part, appear to refer to acts of saying that S (the saying being the source of their performativity) with the meaning of the verb incorporating in addition such things as motive and a number of other disparate facts which McCawley disclaims understanding. In closing, McCawley notes the parallel between the two sources of performativity which he has uncovered and Austin's original performative-constative distinction.

Searle, whose theoretical orientation is in the tradition of meaning as use, approaches the problem of a taxonomy of speech acts in a different way. An important difference between Searle's classification and others is that instead of attempting to classify illocutionary verbs, he sets up a classification scheme in terms of illocutionary acts. His objective is to attempt to determine how many kinds of illocutionary acts there are. The approach to illocutionary classification which he recommends is an inductive one. By looking at the ways in which particular illocutionary acts differ from one another, he suggests, one can determine what the criteria for the classification of illocutionary acts should be.

The most significant and revealing criterion which he employs is what he calls illocutionary point. Essentially, the point of an illocutionary act appears to be something like what the performance of that illocutionary is conventionally intended to accomplish. Exactly how illocutionary point is related to intended perlocutionary effects is not entirely clear, but it *is* clear that they differ, since, for example, the illocutionary point of a promise is for the speaker to undertake an obligation to do something, which is clearly not the intended perlocutionary effect of a promise. Swearing, stating, and guessing all have the same illocutionary point, namely, to commit the speaker (in varying degrees) to the truth of the expressed proposition, but they differ in illocutionary force. Orders and suggestions, similarly, share a common illocutionary point, attempting to get the hearer to do something, but differ in the nature of the obligation they impose.

A second major criterion for Searle is what he calls the direction of fit between the propositional content of an illocution and the world to which the propositional content applies. For example, the illocutionary point of descriptive illocutionary acts, such as assertions, declarations, and explanations, is to attempt to represent some state of affairs, hence their direction of fit is words to world. They are attempts to make the words fit the world. Illocutionary acts of commitment, on the other hand, such as appointments, requests, and promises have as their illocutionary point something like an attempt to influence the world by uttering words. Their direction of fit is, then, world to words.

Searle's third major criterion for distinguishing types of illocutionary acts is that of expressed psychological state. Here, Searle refers to the fact that reports, statements, and explanations are normally taken as expressions which reflect a speaker's *beliefs*, that promises and threats are

normally taken as expressions which reflect a speaker's *intentions*, and that a large number of illocutionary acts, among other things, involve the expression of speaker attitudes or psychological states. Such illocutionary acts may be performed insincerely, of course, but they remain, nonetheless, *expressions* of the relevant psychological states.

After briefly discussing his other criteria for distinguishing types of illocutionary acts, Searle then succinctly reviews and criticizes Austin's classification of illocutionary verbs, pointing out, like McCawley, inconsistencies and overlaps in Austin's schema and, most importantly, drawing attention to the essentially *ad hoc* nature of Austin's classification system.

Searle then goes on to describe his own taxonomy of illocutionary acts, based primarily on his three major criteria. For the acts he considers, the taxonomy he proposes appears to be rather satisfyingly systematic. Since Searle is not a generative semanticist, he does not *base* his classification schema on the syntactic properties of sentences conventionally used to perform the illocutionary acts which he is attempting to classify, but, having arrived at a classification of illocutionary acts, he then proceeds to examine the deep structures of such sentences. For his first four classes, Representatives, Directives, Commissives, and Expressives, he makes explicit proposals for their underlying forms, and for Declarations, he notes that several different underlying forms are possible, depending upon the topic of the declaration.

Searle concludes by pointing out that the relationship between illocutionary verbs and illocutionary acts is not nearly as direct as it has been assumed to be, noting cases where the same illocutionary verb is used to perform illocutionary acts with different illocutionary points, and that in general the relationship between illocutionary point and illocutionary verbs is not one to one, as some illocutionary verbs don't mark illocutionary point at all (e.g. *announce, confide, reply*), some incorporate more than one illocutionary point (*boast, threaten, accuse*) and others mark more than one illocutionary point (*protest*) or have alternative points (*warn, advise*). Searle's primary conclusion, however, is that there are just five types of illocutionary acts which he posits: Representatives (making claims about the state of the world), Directives (attempts to get people to do things), Commissives (committing the speaker to do things), Expressives (expressing the psychological state of the speaker), and Declarations (the sort of paradigm illocutionary act whose successful performance results in a change in the world).

Interestingly enough, in spite of the differences in their theoretical orientations and objectives, the taxonomies which McCawley and Searle end up with are strikingly similar, as the table of *approximate* correspondence below (exaggeratedly) indicates.

Austin	*McCawley*	*Searle*
Verdictives	Verdictives	Representative Declarations
Exercitives	Operatives Imperatives Advisories	Declarations Directives
Commissives	Comnisives	Commissives
Behabitives	Behabitives	Expressives
Expositives	Expositives	Representatives (also includes many of Austin's Verdictives)

This fact is not too surprising, given that both McCawley and Searle start from Austin's classification of the same data and that their assumptions and expectations, taken together, about how a language works are not as radically different as their theoretical assumptions alone would lead one to believe. In addition, the fact that McCawley's approach is to characterize performativity whereas Searle's is to differentiate illocutionary acts does not appear to affect their resultant taxonomies significantly.

The major advantage of Searle's classification system over both Austin's and McCawley's appears to be the attention Searle has devoted to the question of developing general criteria of classification. Even though the taxonomy he develops does not differ radically from the others, one feels that Searle's criteria of classification offer the beginning of an explanation of why the taxonomy turns out as it does. But even Searle's system appears to suffer from one problem which it shares with the others. Searle's criteria are simply and loosely empirical. Roughly, if we look at a number of cases, we discover that these criteria for the differentiation of individual illocutionary acts recur. But there is no apparent reason for them to recur. Perhaps the satisfaction Searle's classification engenders is simply based on optimism. Some of his criteria appear frequently, so we assume that they may lead us to explanation.

John Ross's paper, "Where to Do Things with Words," and Jerrold Sadock's "Aspects of Linguistic Pragmatics" both concern themselves with the question of how to treat cases in which what a sentence might be said to mean is not what a speaker of that sentence might be said to have meant by uttering the sentence (cf. also G. Lakoff's paper in this volume). For instance, sentence (1) may be taken as an ordinary information-seeking question if what the speaker of (1) is interested in is the addressee's progress as a piano student.

(1) Can you play "Stardust?"

But if the speaker of (1) is at a party addressing a pianist who is sitting at a piano, by uttering (1) the speaker may well be requesting that the pianist play "Stardust." In this latter case, the speaker is said to conversationally implicate a request by uttering (1).

Ross basically accepts the Gordon and Lakoff (1971) transderivational approach to conversational implicature, a topic first extensively explored in Grice (1967). On this approach, the sentence-meaning of a sentence such as (1), (the question interpretation; Gordon and Lakoff's *literal* meaning), is represented by a logical form, L_s, from which (1) is derivable by ordinary syntactic rules. The speaker-meaning of a sentence such as (1), (the request interpretation; Gordon and Lakoff's *conveyed* meaning), is represented by another logical form L_{sp}. (1) may convey L_{sp} rather than L_s, according to Gordon and Lakoff, provided that L_s is either (a) the statement of a speaker-based sincerity condition on the use of L_{sp} or (b) the yes-no questioning of a hearer-based sincerity condition on the use of L_{sp}. Since it is claimed that there is a hearer-based sincerity condition on requests to the effect that the speaker must believe that the hearer can comply with the request, L_s will be the logical form of the yes-no questioning of a hearer-based sincerity condition on the use of L_{sp}, so (1) may convey L_{sp}.

As stated, the Gordon and Lakoff transderivational constraint depends on the relationship between the logical form of the sentence-meaning (L_s) and the speaker-meaning (L_{sp}). Accordingly, it should not matter what the derivation from L_s to surface structure is. What Ross first points out is that, given that sentences such as (2) and (3) are synonymous (he claims they are), they should have the same (or equivalent) logical forms, so Gordon and Lakoff's proposal predicts that both (2) and (3) should be usable to

convey requests.

(2) Can you close the door?
(3) Are you able to close the door?

But, assuming that the use of preverbal *please* is a litmus for requests, he concluded that while (2) can be used to convey a request, (3) cannot, as (4) and (5) illustrate.

(4) Can you please close the door?
(5) *Are you able to please close the door?

He concludes, therefore, that the sort of transderivational constraints which Gordon and Lakoff proposed must involve not just the relationship between logical forms such as L_{SP} and L_S, but between L_{SP} and part or all of the derivation relating L_S and its surface form.

Ross next considers the syntactic rule of Slifting, which relates sentence pairs such as (6) and (7).

(6) I presume that you are Dr. Livingstone.
(7) You are Dr. Livingstone, I presume.

In particular he looks at the conditions governing the slifting of embedded questions, and claims that the syntactic rule of Slifting interacts with conversational inplicature in an interesting way. On the basis of a number of examples like (8)-(11), he puts forth the hypothesis in (12).

(8) I want you to tell me when dinner will be.
(9) When will dinner be, I want you to tell me.
(10) I want Fat Albert to tell me when dinner will be.
(11) *When will dinner be, I want Fat Albert to tell me.
(12) Embedded questions can only be slifted if the sentences in which they appear have the basic or derived illocutionary force of a request on the part of the speaker for the hearer to provide the relevant information about the wh-ed parts of the question that is to be slifted. [his (30)]

What is of interest here is Ross's claim that Slifting, which appears to be an ordinary syntactic rule, is governed in part by conversational implicature, since the applicability of Slifting depends on the basic or *derived* illocutionary force of the sentence in which the question is embedded. Since conversational implicature is thought to be a pragmatic or semantic and pragmatic phenomenon, Ross is claiming that there are pragmatic conditions on syntactic rules.

He then goes on to consider even more complex cases, in which sentences like (8)-(11) are embedded as complements of verbs of saying, as in (13) and (14).

(13) Archie_i told Edith_j that he_i wanted her_j to tell him_i when dinner would be.
(14) When would dinner be, Archie_i told Edith_j that he_i wanted her_j to tell him_i.

He claims that the conditions on the slifting of embedded questions in these cases parallels those claimed for sentences like (8)-(11). In particular, Slifting still depends on the basic or derived illocutionary force of the sentence embedded under the verb of saying and dominating the embedded ques-

tion. Ross then goes on to argue that the parallel restrictions on Slifting between superficially unembedded cases like (8)-(11), and the sentences embedded under verbs of saying, like (13) and (14), support the performative analysis. He also argues that the kinds of transderivational constraints postulated by Gordon and Lakoff to account for conversational implicature must be allowed to apply to embedded questions such as (13) above, but that while they may affect the illocutionary force of the embedded sentence, they do not appear to affect the illocutionary force of the main sentence. Thus Slifting can apply to the embedded question of (13), provided that the substructure (15) of (13) has the *derived* illocutionary force of a request.

(15) That he_i wanted her_j to tell him_i when dinner would be.

The result of applying Slifting, namely (14), remains a declarative sentence, just as (13) was.

In conclusion, he reiterates his claim that syntactic and pragmatic rules must be interspersed in grammar, rather than being handled by separate syntactic and pragmatic components, arguing that the only way to avoid this conclusion is to redefine the relationship between syntax and pragmatics in an unacceptably peculiar way. So far, the alternative of so redefining the relationship between syntax and pragmatics has not been explored extensively, but on the basis of his preliminary observations, Ross professes to see no obvious advantages to it.

In "Aspects of Linguistic Pragmatics," Jerrold Sadock assumes essentially the same framework that Ross and Gordon and Lakoff do: in particular, the performative analysis, in which every sentence is dominated, in its underlying form, by a performative clause which specifies the illocutionary force of that sentence, regardless of whether the superficial form of the sentence is performative or not. He assumes, along with other generative semanticists, that the underlying syntactic form of a sentence is its logical form. The major question he is interested in is how one determines what the logical form of a sentence is, especially what its underlying illocutionary force is. If there is a sentence, such as (1), which can be used either as an ordinary information-seeking question or as a request, how does one decide whether the illocutionary force of the logical form of the request use should be that of a question or that of a request?

One might assign the request use the logical form of a question and derive the request logical form transderivationally à la Gordon and Lakoff, or one can assign the request use the logical form of a request and, presumably, derive the surface form (1) from it. This is a general problem which arises in apparent cases of conversational implicature, and one which appears to require a principled answer, since, as Sadock notes, consistently following the Gordon and Lakoff approach would allow one to undermine the performative analysis itself along with most of the other syntactic arguments for abstract, semantically relevant underlying structure. In general, all of these cases could be handled transderivationally without the performative or abstract analysis by transderivationally associating the non-abstract derivation in question with the abstract logical form being argued for, rather than claiming that the abstract logical form *is* the underlying logical form of the structure in question.[3] Sadock argues that the logical form of sentences such as (1) must be determined on the basis of classical syntactic arguments, such as co-ocurrence restrictions and the applicability of transformational rules, rather than following either the non-abstract alternative or the abstract alternative routinely. Specifically, the question of what illocutionary force is to be assigned to the logical form of sentences such as (1) must be decided on the basis of syntactic arguments.

The particular phenomenon Sadock chooses to illustrate his point with

is the various illocutionary forces which are commonly associated with imperative surface strings in English, i.e. "subjectless, tenseless sentences whose logical subject refers to the addressee..." He claims that, on the basis of syntactic evidence, such sentences may have at least the following illocutionary forces--requests, warnings, contingent promises, instructions, orders, and suggestions--and he identifies and discusses fourteen syntactic reflexes which lead to this subcategorization. For instance, he claims that of the six imperative subtypes, the rule which deletes their second-person subjects is optional only for warnings. Not all of his syntactic reflexes pick out a *single* subtype, however; e.g. he claims that both warnings and contingent promises occur in the conditional form "If S_1, then S_2," whereas none of the other subclasses occur in this syntactic form. He distinguishes, however, between warnings and contingent promises on three other grounds (interrogative tags, preverbal *please*, and disjunctive form). Thus, in general, he infers the existence of subclasses by isolating overlapping superclasses when a given syntactic test doesn't isolate a single illocutionary subclass.

While such a procedure allows Sadock to infer the existence of six different illocutionary types, simply assigning them six distinct illocutionary forces in logical form would neither account for the fact that they all have the same basic surface form nor that various combinations of the illocutionary types share other syntactic perculiarities. In order to account for these similarities, while at the same time accounting for the differences which he has pointed out, Sadock proposes and sketches very roughly a lexical decomposition analysis for the underlying form of the performative clause of these sentences, assigning common aspects of underlying form to account for syntactic and illocutionary similarities, and distinctions in underlying form to account for their syntactic and illocutionary peculiarities.

The methodological objection to the Gordon and Lakoff approach which Sadock offers appears to be a significant one, but Sadock's alternative forces him to something like the lexical decomposition analysis. Given the preliminary nature of that analysis and the paucity of independent support offered for it, it is difficult to determine the relative merits of either Sadock's or Gordon and Lakoff's approaches to the problem. This is clearly an area where additional research is in order.

In her paper, "What You Can Do with Words," Robin Lakoff offers an informal and programmatic characterization of politeness in language. The basic question she attempts to answer in exploring the notion of politeness in language is why there are alternative ways of expressing approximately the same message. She begins by describing a number of ways in which speakers of English appear to choose indirect ways of saying things rather than direct ones, such as the use of sarcasm and irony, euphemism, conversational implicature, hedges of various types, and circumlocutions. Her basic claim is that in order to understand them, we must examine the situations in which they are employed and why they are employed in those situations.

If one assumes that language exists for the purpose of communication, then how is the fact that speakers resort to the use of such devices to be explained? Certainly they do not serve to make clearer the message being communicated. In fact, they have just the opposite effect; they tend to obscure it. The answer to the question, according to Lakoff, is that we cannot understand the phenomena of language in terms of simple communication. Since communication takes place between people, the social factors involved in communication must also be taken into account. The most direct or clear way of communication is often not the most socially appropriate one, and considerations of clarity, which follow from the communicative function of language, must share the stage with considerations of politeness, which follow from the social function of language.

For Lakoff, then, the two metamaxims of conversation are "Be clear" and "Be polite." In many instances these two maxims conflict, and in such cases each must give ground to the other in order to effect a compromise which is as clear as it can be without being impolite and as polite as it can be without being unclear.

The analysis she offers is explicitly Gricean. She takes Grice's (1967) Rules of Conversation to be rules of clarity, and offers her own rules as rules of politeness, Thus, paralleling Grice's maxims of Quantity, Quality, Relevance, and Manner, she offers maxims of Formality, Hesitancy, and Equality. Her maxims, however, unlike Grice's, tend to be mutually exclusive, to apply in different types of social situations.

The formality maxim, which Lakoff characterizes by the mottoes "Don't impose" and "Remain aloof," appears to come into play most heavily in situations in which social distance is maintained, either as a result of some conventional social inequality or, in cases of social equality, as a result of some other social convention prohibiting social intimacy, as among relatively distant acquaintances or in formal social situations. She mentions, as examples, the use of title plus last name in personal address, the use of polite second-person pronouns, and the use of technical vocabulary in professional discussions. Failure to observe this maxim in socially appropriate situations is taken as forward, presumptuous, or familiar behavior, whereas the use of the maxim, when it isn't called for, is taken as pompous or stuffy behavior.

The hesitancy maxim, which Lakoff characterizes by "Allow the addressee his options," appears to amount to expressing deference to the addressee. The ways in which deference is expressed, namely, the expression of uncertainty on the part of the speaker, is in some cases not the expression of deference at all, but genuine uncertainty. In other cases, those which she would label true politeness, the speaker is not uncertain at all, but, wishing not to impose his view on the addressee, he says what he thinks as though he were uncertain. In still other cases, which Lakoff labels conventional politeness, the speaker expresses polite uncertainty, not to allow the addresse his options, but to make it *appear* that he is allowing options when, in fact, both speaker and hearer know that the speaker is certain and that the hearer has no real option but to go along with the speaker. Such cases appear to be a result of the interaction of the maxim of hesitancy and the maxim of equality Lakoff includes such phenomena as the use of questions in place of declaratives euphemism, hedges, and conversational implicature as instances of the use of the hesitancy maxim. Such phenomena also appear to be involved in the kinds of female behavior described in Lakoff's (1973) paper "Language and Woman's Place." Errors of omission of hesitancy are taken as pushy or abrupt behavior, whereas the use of hesitancy in inappropriate situations is taken as a sign of uncertainty or meekness.

The final maxim--equality or "Act as though you and the addressee were equal; make him feel good--Lakoff calls a rule of informality, which appears to be a more apt characterization than equality, since even in many formal situations, equality obtains. Intimacy, either genuine or conventional, is characteristic of such situations. Where there is genuine intimacy, there is no need to stand on ceremony, and, in situations where social inequality normally precludes such intimacy, the speaker of superior social status may introduce equality, either genuinely or conventionally, to put the social inferior at ease. The use of first names or nicknames, familiar second-person pronouns, and open discussion of intimate topics such as sex and personal finances are all instances of equality phenomena.

After discussing the application of the rules of conversation to interrogative and imperative sentences, Lakoff goes on to explore and to describe a large number of cases of the interaction of the rules of politeness and

those of conversation. She notes that typical conversations do not adhere to Grice's maxims in a straightforward way, but that, given that a conversational contribution does not clearly conform to the maxims, the listener can generally arrive at an interpretation of the contribution consistent with the maxims by employing Grice's Cooperative Principle. In addition, she notes, the listener can usually figure out why the speaker made his contribution in the way he did. The "overriding principle" of conversation, combining the notions of clarity and politeness, is, for Lakoff, "Be clear, unless there is some reason not to be." If someone isn't clear, one starts looking for some explanation of the unclarity, generally in terms of politeness phenomena.

Just as Grice's theory of conversation can be viewed as a first attempt to arrive at a theory of rational human interaction, Lakoff's theory of politeness can be viewed as a first attempt to arrive at a theory of interpersonal relations. It is, of course, only a first attempt, and, as such, is highly tentative, rather anecdotal, and incomplete. One might wonder, for example, about the way in which she proposes to organize the politeness phenomena she discusses, since formality and equality appear to be opposite sides of the same coin in a number of respects. It also appears that her analysis is oversimplified, since while the use of first names and the discussion of sex lives are clearly both instances of intimate conversational behavior, they differ radically in degree of intimacy. At the same time, one might also wonder whether she has cast her net wide enough, since there undoubtedly are linguistically significant aspects of conversational context besides clarity and politeness. There are also objections to widening the net as far as she has, objections which she addresses in the introduction to the paper. Finally, there is the objection which might be raised against both her work and Grice's, that it is non-empirical, both in that it is not based on systematic observation and that it is not predictive, hence, is unfalsifiable, though perhaps of heuristic value. It is, however, a provocative first step in understanding some major and interesting puzzles about the nature of human linguistic interaction.

A fundamental tenet that unites the various approaches to linguistic theory that have come to be known as generative semantics is that there is no empirically justifiable division between semantics and syntax. George Lakoff, in his paper "Pragmatics and Natural Logic," argues that considerations similar to those that lead generative semanticists to this position also lead to the conclusion that pragmatics should be included in this continuum as well. More specifically, Lakoff sketches how three indubitably pragmatic concerns--indexical elements, performatives, and implicatures--can be incorporated into his version of a generative semantics theory without extensive modification. Indeed, it is argued that the theory would acquire unwholesome accretions precisely in the event these pragmatic elements were to be accorded separate and special treatment.

The strategy for handling performatives and indexicals is to build them explicitly into the "logical form" (roughly, a structure in logical notation which represents the literal meaning of a sentence). Lewis (1972) has made similar proposals for performative sentences such as questions and commands, deriving "Stop" and "I command you to stop," for example, from the same underlying structure, but he rejected the idea of analyzing declaratives in a parallel way. Lakoff argues, however, that declaratives should be taken to have an underlying performative verb in logical structure and that Lewis's objections to doing so can be overcome if one pays sufficient attention to the differences between "true" as a technical, model-theoretic term and "true" as an ordinary English adjective.

Indexical terms for speaker and hearer are to occur automatically as subject and indirect object, respectively, of the performative verb now present

in the logical form of every [or nearly every (cf. Appendix 3 of his article)] sentence. This obviates the need to specify these terms as separate coordinates in the index or point of reference employed in the model-theoretic interpretation of the sentence. Similar terms for place and time of utterance are also to be included, presumably as adverbial modifiers of the performative verb phrase, but the details of this are not specified.

Finally, conversational implicatures of the Gricean sort (Grice 1967) are foreseen to be ultimately formalizable as "context-dependent entailments" which are no different in principle from garden-variety semantic entailments. This last suggestion is quite programmatic in nature and leaves perhaps more room for doubt than do the other proposals as to the ultimate success of the undertaking. One serious difficulty that stands in the way is giving a precise account of terms such as "cooperation" and "relevance," which figure significantly in Grice's maxims of conversation. Lakoff suggests that the means for accomplishing this is by the techniques of "Natural Logic" (G. Lakoff 1972), a cluster of proposals which, it must be acknowledged, are themselves still highly programmatic and of unproved effectiveness in the face of so difficult an analytic task.

The papers presented at the conference by Stalnaker, Thomason, and Karttunen form a kind of "natural class," in that all deal centrally with the problem of presupposition. Thomason's paper in its revised version (in this case the revision actually amounts to an entirely new paper) takes up the subject of presupposition almost incidentally as only one of several phenomena to be treated in the pragmatic theory he envisions. Yet all three papers preserve a unity of approach that still makes them seem to belong naturally together.

The authors are agreed that presupposition is fundamentally a pragmatic notion. It is thus not to be explained purely in terms of the meaning or content of sentences; rather, the users of sentences and the situations in which they use them are to figure in the account. In "Presuppositions," Stalnaker outlines how this might be done. He notes that the participants in a linguistic exchange typically take the truth of certain propositions for granted (or in certain situations perhaps only pretend to do so), and each assume that the others recognize that he or she is doing this. These shared assumptions form a background of "common knowledge" against which the conversation takes place, and as such they constitute an important part of the whole conversational context. Certain sentences will now be appropriate (felicitous, acceptable) only if uttered in a context containing shared assumptions. To take a standard example, "The Queen of England is bald" is appropriate only in a context in which it is assumed that England has a unique queen.

Stalnaker departs from the more customary usage by taking the term "presupposition" to refer to the relation between persons and the propositions they take for granted on a particular conversational occasion. Sentences have presuppositions then only in a derivative sense. In Stalnaker's terminology, a sentence S *requires a presupposition* P just in case S would normally be appropriate only in contexts in which the speaker presupposes P (in the sense of "takes for granted").

Thomason and Karttunen, on the other hand, while not quarrelling with Stalnaker's theoretical account of presupposition, prefer to stick with the already fairly well established terminology in which *sentences* are said to presuppose propositions. They have suggested that in order to avoid confusion Stalnaker's use of "presuppose"be replaced by "presume," but Stalnaker has evidently declined to adopt this proposal. It must be emphasized here, however, that the disagreement on this point is only over terminology and not

The papers by Stalnaker, Karttunen, and Thomason deal with presupposition--the first two as a topic of central concern, the last rather more

peripherally as one of several phenomena to be handled in an envisioned pragmatic theory.

All three authors find it advantageous to account for presuppositional phenomena using pragmatic concepts such as "speaker," "context," and "acceptability." Stalnaker, for example, in his paper "Pragmatic Presupposition," takes as a fundamental notion the set of propositions that the participants in a (normal) linguistic exchange "take for granted." These shared assumptions comprise a background of "common knowledge" against which a conversation takes place, and each participant would be said, in Stalnaker's terms, to (pragmatically) presuppose these propositions. Utterance of a sentence is appropriate (felicitous, acceptable) only when made in a context containing the requisite shared assumptions. For example, "The Queen of England is bald" is appropriate only in a conversational context in which the participants presuppose that England has a unique queen.

Thus, for Stalnaker it is people who presuppose, not sentences or statements, or propositions. The appropriate relations between linguistic entities could of course be defined derivatively, but Stalnaker argues that it is unnecessary to do so since all the relevant facts can be explained directly in terms of his notion of speaker presupposition.

One putative advantage that accrues to the pragmatically based approach is that one need not say, as in the standard semantic accounts, that a declarative sentence lacks a truth value when one of its presuppositions is false. This becomes a separate issue to be decided case by case in favor of the best overall linguistic theory. Should it turn out, however, that the optimal semantic component assigns no truth value to some sentence when a presupposition fails, this is easily squared with the pragmatic account, since in any context the utterance of a truth-valueless declarative sentence will normally be infelicitous. Thus, if S presupposes P in the semantic, truth-value-gap sense, it will normally be the case that someone who utters S will presuppose P in the pragmatic sense; the converse need not hold, however. Similarly, the semantic component might be relieved of other stresses by absorbing them into pragmatics: entailment could be separated from presupposition and changes in meaning of a sentence from context to context need not occasion variation in its semantic representation.

Stalnaker suggests still other explanatory possibilities that may arise from the freedom allowed by taking the pragmatic viewpoint. For example, one might hope to account for the differences in behavior of factive and semi-factive verbs and, further, for the "filtering" of presuppositions in sentences joined by "and," "or," and "if...then." In the latter case, one starts with the pragmatic notion of presupposition and makes a few additional and seemingly natural assumptions about how contexts are incremented on the basis of preceding discourse.

A similar proposal is put forward by Karttunen himself in his paper "Presupposition and Linguistic Context." It arises out of his attempt to reformulate the filtering conditions for compound sentences in terms of the contexts which satisfy their presuppositions (in Karttunen's terminology, the contexts which *felicitate* such sentences). He shows that by looking at the problem in this way--asking for any sentence what its felicitating contexts are rather than what its presuppositions are--one arrives at a particularly simple and elegant formulation.

The alleged benefits of defining presupposition pragmatically seem to come at a price--or perhaps one should say that they are bought on credit. Our understanding of presupposition is made to rest on--or is at least no clearer than--our understanding of the notion of felicity (or appropriateness, acceptability, or whatever). Ultimately the debt must be paid in the form of a substantive and explicit theory of pragmatics that gives an account of, among other things, what it means to utter a sentence felicitously.

It is this theory and what it would have to be like that concerns Thomason in his paper. He notes that the prospects for constructing such a theory that would meet at least the standards of rigor expected of current theories of syntax and (model-theoretic) semantics are at the moment not very bright. Yet the task must be undertaken, since it would appear that certain pragmatic notions lie at the heart not only of presupposition but of other important linguistic phenomena as well (Thomason suggests topicalization, parentheticals, constraints on identity, and others). If Thomason is right, then it is futile to expect these matters to be properly handled in a linguistic theory that contains syntactic and semantic components but no pragmatics.

FOOTNOTES

[1] Karttunen's paper is not, strictly speaking, a revision of the paper he presented at the conference, but is a later one which builds on his conference paper. Thomason's contribution is more an abstract of his position than a revision of his paper. In addition, the papers presented by H.P. Grice and Larry Horn are not included due to technical problems.

[2] This point is discussed at more length in Harman (1973).

[3] See Green (1973), 68ff. for discussion.

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Against Universal Semantic Representation*

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Transformational linguists sometimes assume that an adequate theory of a language must associate sentences with appropriate universal semantic representations. These representations are to be universal in the sense that they are not to be specific to the language in question. The same semantic representation could therefore be associated with sentences of different languages, and should be, if these sentences have the same meaning.

The assumption in question is made by linguists who believe in interpretive semantics as well as by those who believe in generative semantics. It is made by linguists who envision a semantic representation as a structure of universal semantic features, predicates, or operators, and by those who see it as specifying an intension or intensional structure of functions, possible objects, possible worlds, and so forth.

I will argue that the assumption is false; that is, that an adequate theory of a language would not, and (in fact) could not, associate sentences with universal semantic representations. More specifically, I deny the need for (and the possibility of) a level of semantic representation in a theory of a language that attempts to capture the competence of speakers of that language. Where McCawley, Ross, and Lakoff have argued that there is no level of deep structure between universal semantic representation and surface structure, I will argue that there is a level of deep structure but no level of universal semantic representation. Putting things a different way, the assumption that I am challenging treats language as a system that encodes prelinguistic thoughts and ideas, whereas I will argue that the thoughts that language encodes are themselves in language and have no existence apart from the language in question.

A theory that characterizes the linguistic competence of a typical speaker of the language will have five distinguishable components: grammar, logic, axioms, theory of conversation, and theory of conceptual role. The *grammar* assigns each sentence an interpreted logical form, or, if the sentence is ambiguous, a set of such forms. By an interpreted logical form I mean something like a deep structure: It indicates logical form and is "interpreted" in the sense that it contains lexical items of the language. The *logic* states principles that determine what relations of logical implication hold among sentences of the language given the purely logical

* Arnold Zwicky, Katherine Pyne Parsons, David Lewis, Emmon Bach, and others will not think that I have met their objections to aspects of earlier drafts of this paper; but I have tried. For more discussion of certain issues, see my *Thought* (Princeton University Press, 1973), Chapters 3-6.

aspects of their logical forms. The *axioms* represent either meaning postulates or, more generally, what is taken to be common knowledge among speakers of the language. The *theory of conversation* includes an account of presupposition, an account of implicature in Grice's sense, and perhaps an account of speech acts. Finally, the *theory of conceptual role* will indicate the role of expressions in relation to theoretical and practical thinking, observation, and behavior.

More specifically, the grammar associates sentences with interpreted logical forms built up out of predicates, arguments, sentential connectives, and quantifiers, with additional possibilities such as sentence modifiers and predicate modifiers (representing certain sorts of adverbs), other variable binding operators (set abstraction for dealing with plurals, etc.), and an operator that functions like indirect quotation for dealing with so called opaque contexts. Actually, I suspect that interpreted logical forms will not contain sentence or predicate modifiers; I believe that adverbs are best analyzed as predicates, just as adjectives, nouns, and verbs are. But that is a controversial hypothesis about the best account of logical form; and for present purposes I need not assume that it is true.

Furthermore, I am inclined toward a grammar that associates interpreted logical forms with sentences by means of transformational derivations. That is, I believe in a theory in which interpreted logical forms are given by deep structures that successive applications of syntactic transformations convert into the relevant surface structures (subject to various constraints). But again, this is just a hypothesis and one that is not needed for my present purposes. I could equally well suppose that deep structures are not full representations of interpreted logical forms because, for example, they do not sufficiently indicate the logical scopes of quantifiers; and I could envision, in addition to syntactic transformation rules, rules of interpretation that assign logical forms to sentences on the basis of their possible transformational derivations.

I *do* assume that predicates and other modifiers in the interpreted logical forms of sentences are predicates and modifiers of that language. They are not universal predicates and modifiers that might appear in the interpreted logical forms of sentences of other languages. In other words, for present purposes I am willing to concede to "interpretive semantics" that, in addition to syntactic transformational rules and rules stating certain sorts of constraints on these, a grammar may also have to include interpretation rules, e.g. for the correct assignment of logical scope to certain constructions. But I reject the interpretivist suggestion that interpretation rules should assign universal "readings" to predicates of the language in terms of universal semantic features and the like.

Again, for present purposes I am willing to concede to "generative semantics" that certain words of a language might be transformationally derived in a nontrivial sense, e.g. certain nominalizations or adverbs. But I reject the generativist suggestion that this is true of all words in a language, that they are all to be transformationally derived from underlying structures containing universal predicates and perhaps other universal modifiers, where these are structures that can also underlie sentences in other languages. For I hold that the underlying interpreted logical forms always contain predicates and so forth that are specific to the language in question.

It is true that many words in a language are ambiguous. Therefore, we will want interpreted logical forms to be able to distinguish among the different predicates that a given word might represent. But that can be done without associating one or another set of universal semantic features with a word. All that is needed is that we distinguish the predicates. We can do that, for example, by using subscripts.

Someone will object that subscripts can allow us only to *distinguish* different predicates but not to exhibit relevant differences in meaning. My answer is that these differences in meaning are to be exhibited not by the interpreted logical forms taken by themselves but only by the interpreted logical forms taken in conjuction with other components of the theory, for example, the axioms which involve predicates that appear in the relevant interpreted logical forms.

The logic states a number of principles which together characterize the logical implications among sentences of the language. Since logical implications are ones that hold by virtue of logical form, apart from the interpretation of predicates and other nonlogical operators, we must therefore suppose that grammar distinguishes logical aspects from nonlogical aspects of interpreted logical form.

We might use the grammar to make this distinction as follows. First, we must introduce a notion of a predicate that will include not only atomic but complex predicates. Consider any interpreted logical form ... *a* ... containing one or more occurrences of the proper name *a*; then consider the result of substituting other names--*b*, *c*, *d*, etc,--for these occurrences of *a* in this interpreted logical form. What the various results have in common is a one-place predicate ...①..., which can be thought of as a function that maps proper names onto sentences. We can in like fashion consider sentences with *n* different names, consider ways of substituting other names, and thus come up with the idea of an *n* place predicate, a function from sequences of *n* names into sentences. Similarly, sentential connectives are functions that map sentences onto sentences; quantifiers are functions that map predicates onto sentences; predicate modifiers map predicates onto predicates; and so forth. (For discussion, see, for example, Michael Dummett, *Frege: Philosophy of Language*, London, Duckworth, 1973, pp. 8-53.)

Now, every vocabulary item in the language that can appear in interpreted logical form, in each of its senses, can be treated as falling under exactly one of these categories. It will represent either an atomic name or an atomic *n*-place predicate or an atomic *n*-place sentential connective, etc. In other words, we have a series of mutually exclusive logical classes of atomic names, atomic *n*-place predicates, and so forth. Nonlogical aspects of interpreted logical form have to do with particular members of open logical classes--predicates, for example. A logical class is open if it has an indefinite number of members and if new members can be added without significantly changing the language. Since new predicates can be added to the language as a matter of course, without significantly changing the language, predicates will count as nonlogical aspects of interpreted logical form. So too will other modifiers and proper names (if names are not predicates). Logical aspects of interpreted logical form involve relatively few words, closed logical classes, and so forth. These aspects cannot be changed without seriously modifying the language. Logical aspects will therefore include scope indicators, variable binders, predicate argument structure, and so forth.

Now, given a distinction between logical and nonlogical aspects of interpreted logical form, the logic will specify which implications in the language hold by virtue of logical form. For present purposes we do not need to decide whether this specification will take the form of a model-theoretic account of validity or merely a set of rules of implication such as that *P* and *Q*, *if P* logically imply *Q*, for any three corresponding statements of the relevant forms.

The logical implications of a sentence, given its logical form, are relevant to its meaning. What a sentence means is partly a matter of what it implies. Since its implications are infinite, they cannot all be ex-

plicitly listed as part of a finite semantic representation of the sentence. It is therefore not true that everything about the meaning of a sentence can be explicitly contained in a single finite representation. Something must be contained implicitly, by implication. For example, because the theory of language contains a logic, the interpreted logical form of a sentence implicitly specifies the infinite logical implications of the sentence.

Other implications are relevant to meaning in addition to purely logical implications. For example, *x sells y to z* implies *z buys y*. This implication is relevant to the meaning of *buy* and *sell*, but it is not a matter of logic alone. Some say that such further implications depend on certain "meaning relations." Others say that no real distinction can be drawn between meaning relations and other relations commonly known to hold. I favor the latter view, but there is no need to settle the issue. The point is that the theory of a language will include a list of axioms, representing either meaning postulates, if the one view is accepted, or principles that express what is common knowledge among speakers of the language, if the other view is adopted. Either way, one relevant axiom will be, for example, *x sells y to z if and only if z buys y from x*.

Implications relevant to the meaning of a sentence include the logical implications of the sentence itself taken together with meaning postulates and/or common knowledge. All this much of the meaning of the sentence (on a given interpretation) is contained implictly in the interpreted logical form of the sentence, given the logic and the axioms. It is contained by implication, that is, by logical implication relative to the axioms.

There is a difference in function between principles of logic and axioms. It is by virtue of principles of logic that a finite statement can represent its infinite implications. One cannot get from a set of statements to implications of the set without appeal to logical principles. Further statements alone will not do the trick. Logical principles are principles of projection, or representation. By virtue of them a statement projects and therefore represents its infinite logical consequences.

Because we can appeal to logical principles of projection and representation, our theories can be stated finitely yet, in a sense, be infinite in content. Logical principles and axioms have different functions, because logical principles are principles of representation, whereas axioms are representations that represent as they do by virtue of the logical principles. That is why logic is more central to language than axioms are. A change in axioms is a change in what is represented. A change in logic is a change in method of representation, and that is a genuine change in the form of language.

Why then are axioms relevant to meaning at all? They are relevant in as much as they represent a common background which everyone can take for granted. To be interested in the meaning of a sentence is in part to be interested in its implications, not just its logical implications but its implications given the common background. More precisely, we are interested in what *new* implications a sentence has, what implications it has given the common background that are not logical implications of the background alone.

To make this more accurate we must turn to the theory of conversation, the fourth component in a theory of language. The axioms represent things that speakers of the language can always presuppose; my point is that one aspect of meaning concerns what is said over and above what has been presupposed.

The theory of conversation is concerned with such things as presupposition and implicature and with distinguishing these from what is, in a strict sense, said. It will also be concerned with the nature of speech acts. Part of the theory will probably be universal, giving general charac-

terizations, applicable to conversations in all languages, of presupposition, implicature, and the conversational strategies on which they depend. Another part will be specific to the language in question, since, for example, certain aspects of the meaning of words like *even* and *but* can only be explained in terms of conventions concerning presuppositions and implicatures.

Does any of this mean that our theory of language should associate sentences with semantic representations that include not only indications of interpreted logical form but also statements of what is conventionally presupposed and implicated? Of course not. That would be as foolish as attempting to list all of the logical implications of a sentence in a single finite representation. It cannot be done, because there will be infinitely many conventional presuppositions and implicatures, and it need not be done since these infinitely many conventional presuppositions and implicatures are implicitly represented by the derivation associating interpreted logical form with surface structure (and phonetic representation), given the theory of conversation. The theory of conversation is to conventional presupposition and implicature what logic is to logical implications. To suppose that we need semantic representations that mention what is conventionally presupposed or implicated is like thinking that we need semantic representations that mention what is logically implied by sentences.

The mistake here is like that in the following argument: "*x sells y to z* is synonymous with *z buys y from x*; therefore our theory must assign these sentences the same semantic representation." The mistake lies in thinking that everything about the meaning of a sentence must be explicitly included in a single finite representation associated with the sentence, as if everything could be! In fact, there is no reason why the equivalence in meaning cannot be represented implicitly by the different interpreted logical forms of these sentences, given the axiom *x sells y to z if and only if z buys y from x*.

So far, I have said something about grammar, logic, axioms, and the theory of conversation. I turn now to the fifth and last component of the theory of a language--a theory of conceptual role. What I have in mind here is the idea that meaning has something to do with the role an expression has in a conceptual scheme. One important aspect of conceptual role is involved with implications among expressions, and that aspect is already captured by the first three components of the theory of language--the grammar (which assigns logical forms to sentences), the logic, and the axioms. But conceptual role has to do with more than such interrelations among expressions. Also relevant are relations to observation and to behavior.

The connection with observation is particularly relevant in the case of color words. The normal use of *red* includes the ability to apply the word correctly to perceived red objects, and it is part of the meaning of the word *red* that this is so. This is not just a matter of axioms, or of its being common knowledge that speakers can normally do this. We are disinclined, for example, to say of someone blind from birth that he or she really knows what *red* means, for we doubt that such a person would be able to apply the word correctly if that person were suddenly to be cured of blindness and we suppose that to know what *red* means is to be able to apply the word correctly. On the other hand, a normal speaker who goes blind at the age of twenty continues to know what the word *red* means because he or she should be able to apply the word correctly if his or her sight were restored.

The connection with behavior is particularly relevant with words like *harmful* and *dangerous*. To understand the meaning of these words, it must be true that you will feel inclined to avoid situations to which you would

apply them. Other words have an intermediate status--for example, *food*, *obstacle*, and *money*. To understand the meaning of these words you must have the ability to recognize something as food, as an obstacle, or as money, and you must also be able to act appropriately, that is, to eat food, to avoid obstacles, or to spend money. Of course, you do these things only under certain conditions.

In fact, all words and expressions are connected at least indirectly both to observation and to behavior by virtue of connections with other words and expressions. A color word like *red* is indirectly connected to behavior because the appropriateness of its application can in certain circumstances be a sign of the appropriateness of the application of words like *food* or *danger*, which have a more direct connection with behavior.

A theory of conceptual role will also say something about what makes a name of a particular thing. Presumably this is not just a matter of a speaker's being able to apply the name correctly when the appropriate thing is perceived. That can have some relevance, but also relevant are past applications of the name and causal connections between those applications of the name and causal connections between those applications and its present use. Kripke and others have made much of this aspect of names.

In any event, a theory of conceptual role is a theory about connections between observation and language, language and other language, language and behavior, and so forth. These connections are not easy to specify, and it is probably impossible exhaustively to characterize the conceptual role of any single expression except by comparing its role with that of another expression, perhaps an expression in a different language. This can have the consequence that one wrongly supposes that an account of meaning in a theory of a language must take the form of a translation. But, although for certain purposes translation is useful, it only pushes the theoretical problem back one step. If we want an account of the conceptual role of a particular expression in English and are told that it is quite similar to the role of this other expression in German, that may be enough for our purposes. However, it may not, for we are now left with the question of how we are to specify the conceptual role of the latter expression in German.

The same problem arises when it is suggested that it is enough for an account of meaning to translate sentences, or interpreted logical forms of sentences, into a universal language of semantic representation. For then we are left with the problem of specifying the conceptual roles of aspects of the universal semantic representations. One might hope to explain the conceptual role of expressions first by translating them into a universal language of semantic representation and then by giving an account of the conceptual role of the universal semantic representations. That may seem to be the most efficient way to proceed. However, such a use of universal semantic representations is not going to work. It would work only if there were a universal language into which all other languages could be translated without loss of meaning, but there can be no such language.

To see this one must observe that there is a connection between the question of whether there is a system of universal semantic representation and the question of whether there is thought that is essentially thought in language. The latter issue is not whether all thought is in language (for it is obvious that much is not), but whether any is. Specifically, the issue is whether language should be conceived as a system for encoding thoughts that are themselves not in language or should be regarded as a new system of representation for thought--an addition to the prelinguistic system of representation in which one thinks.

That there is a connection between the latter issue and the earlier one about the possibility of a universal system of semantic representation is revealed by the parallel that exists between a theory of conceptual role of

expressions in a language and a theory of the nature of psychological states and processes in terms of their functional relations with each other and with observational input and behavioral output. For example, a given psychological state is the belief that this is red partly because of a connection between that state and the possibilities of certain observations. Another psychological state is the belief that a course of action is dangerous partly because of its potential connection to the avoiding of that course of action. And so forth, just as in my earlier discussion of the conceptual role of linguistic expression, including my remarks about the relevance of causal factors.

The correlation is no accident. For a speaker of English there is obviously a connection between the belief that a particular thing is red and the sentence *this is red*.

Conceptual role is relevant to meaning because meaning depends in part on what beliefs and other psychological states a sentence is correlated with and because the natures of psychological states are determined by their roles in the functional psychological system that constitutes a human personality. In other words, a sentence has a given representational character because it is conventionally associated with a psychological state which has that representational character. The representational character of a psychological state depends on what state it is. For example, the belief that Noam is smart is the belief that represents Noam as smart. What state it is determined by its functional role in the whole system of psychological states.

So the question of whether there can be a universal language of semantic representation becomes the question of whether the psychological states conventionally associated with sentences of a language can be supposed to have an existence apart from the language. If so, then a single universal account of the representational character of those states can be given once and for all, and a theory of conceptual role for a particular language need only specify how sentences are conventionally associated with psychological states. Universal semantic representations would in effect be representations of the underlying psychological states, the thoughts that exist independently of language.

On the other hand, if the relevant psychological states have no existence apart from language, so that the thoughts expressed by language are essentially constituted in language, then representations of these underlying thoughts will not be universal semantic representations but will in effect be representations of what I have been calling interpreted logical forms of sentences of the language.

Given the one conception, language is a code that we can use to encode thoughts we might have had quite apart from having learned language. This is a common conception of language among linguists, but it is the other conception that is right. Language is in the first instance a system of representation for thought. In learning a language one does not learn to express in words thoughts that were not themselves in words; rather, one learns a new way of thinking. In learning a new language you must at first laboriously translate back and forth between your native tongue and the new language, but eventually you are able to think in the new language so that translation back and forth is no longer necessary. Similarly, learning a branch of mathematics or a science involves learning a new language. It is not just that there is new terminology. You must learn to think in that terminology and that involves learning various principles and procedures of the theory, principles and procedures that can only be stated using the new terminology.

Thought requires a system of representation. We can suppose that among the relevant representations are underlying representations of sentences

that are associated with those sentences by an adequate grammar. We can take these representations to be what I am calling interpreted logical forms, which contain predicates and so forth of the language in question. I am opposing the idea that we can take these representations to be universal semantic representations that are independent of any particular language. My reason is that learning a language, like learning a theory, is not just learning a code for old thoughts but learning a new way to think, a new system of representation for thought, a new theory, a new world view.

Conceptual structure is at least partly a matter of what theories of the world are treated as true; it is therefore impossible that languages associated with quite different world views could be translated into each other or into any third language without loss of meaning. For example, compare a language in which a theory of medieval alchemy is expressed with one in which the theory of contemporary chemistry is expressed. Neither language could be translated without loss of meaning into the other, nor could both be translated into some third "neutral" language. The difficulty is that there will be expressions in each language whose conceptual roles are duplicated by no expressions in the other language, and there will be no other language containing expressions with all those different roles. For that would be the language of someone whose world view contained both the viewpoint of medieval alchemy and that of contemporary chemistry, which is impossible. Therefore, there can be no universal system of semantic representation into which all languages can be translated without loss of meaning.

The precise formulation of this point is a delicate matter. For one thing, a language must here be identified with a dialect or idiolect at a particular time. A scholar might express both medieval alchemy and contemporary chemistry in English, broadly construed. But there will be a shift in idiolect between the one occasion and the other; the scholar's words will not mean the same thing on the two occasions. What his words mean depends in part on what principles he treats as true. When his words are to be used to express the views of medieval alchemy, he must treat as true various principles accepted by medieval alchemists. And when his words are to be used to express the views of contemporary chemistry, he must treat other and quite conflicting principles as true. He will not be able simultaneously to treat both sets of principles as true because at no time will his changing idiolect be adequate to express both points of view. If he is to compare the theories, he must engage in what Quine calls "semantic ascent" and speak in a metalanguage about the two different viewpoints that are expressed in their distinct object-languages or idiolects. He can consider in the metalanguage the relative merits of adopting one or another of these viewpoints--of speaking one or another of these object-languages--even though he cannot translate both object-languages into the metalanguage without loss of meaning.

Finally, let me add that once we understand the connection between thought and language, we can understand why there can seem to be a universal system of concepts expressed in language. Language modifies and extends a prelinguistic system of representation. Presumably the prelinguistic system is much the same from person to person; its main characteristics are no doubt genetically determined. Language modifies this system but is also influenced by it. We would expect that many characteristics of linguistic representation are to be explained by the way in which linguistic representation is a modification of a prelinguistic system. For example, we might expect that our logical notions and our ideas of causality and of agency have a source in more primitive versions in prelinguistic representation. And we might expect this to be true for other languages as well; hence a semantic universal: all languages have a way of representing

logical notions, causality, and agency. But we must be careful. To assume that the same concept of agency, for example, is expressed in all languages would be like assuming that the concept of a chemical substance in medieval alchemy was the same as the concept of a chemical substance in contemporary chemistry just because the latter has derived from the former. Different concepts of agency will evolve in different languages depending on the world views of those who speak the languages. It would be an error to suppose that a given linguistic way of representing agency simply encodes the old prelinguistic concept.

That ends my main argument against universal semantic representations. Let me now say something about one sort of objection to what I have said. Objection will be raised on the grounds that I have misconstrued the nature of semantic representations. It will be said that the system of semantic representation is not to be taken either as a language or as a system of representation for thought. Instead, it will be said, it is to be taken as a system of universal meanings or senses.

Now I have nothing against talk of meanings or senses. The sense of meaning of a sentence can be identified with the thought the sentence expresses; the sense or meaning of a word or phrase can be identified with the idea or concept the word or phrase expresses. But I have argued that the relevant thoughts, concepts, or ideas are essentially linguistic. The relevant thoughts involve interpreted logical forms of sentences.[5] The relevant ideas or concepts involve items that can appear in interpreted logical forms. I can agree that a system of semantic representation is a system of meanings or senses, because it is a system of thoughts and concepts. But I do not agree that senses or meanings are universal, since I claim that the relevant concepts and thoughts are specific to a given language.

Observe that it will not be enough for someone who wishes to defend a system of universal semantic representation to attempt to explain universal meanings or senses with reference to something like possible worlds, possible objects, and complicated functions involving these things. For waiving the nontrivial problem of saying what possible worlds are, there remains the problem of showing that reference to possible worlds, possible objects, and so forth, could play a useful role in a theory of linguistic competence.

One way in which reference to possible words is sometimes said to be relevant to a theory of linguistic competence involves a connection between meaning and truth conditions. To know the meaning of an indicative "statement making" sentence is to know the conditions under which that sentence might be used to say something true. Some philosophers and linguists incautiously conclude from this that the meaning of such a sentence can be identified with its truth conditions or, at least, that a speaker's linguistic competence is partly to be specified as involving a knowledge of truth conditions. Even more incautiously, some of these linguists and philosophers go on to suggest that the relevant truth conditions involve reference to possible worlds. So they conclude, wrongly, that an account of a speaker's linguistic competence must specify his knowledge of which possible worlds and so forth various sentences are true in. For example, it is said to be part of the linguistic competence of someone who knows the meaning of the English sentence *it is raining* that he knows that this sentence is true at a place, at a time, in a possible world if and only if it is raining at that place, at that time, in that world.

This reasoning is totally fallacious. From the fact that to know meaning is to know truth conditions and vice versa, it does not follow that meaning *is* truth conditions. (As Barbara Humphries has observed, that is like arguing that the radius of a circle is the same as its circumference,

since to know the one is to know the other.) Nor does it follow that an explanation of linguistic competence should mention knowledge of truth conditions. Indeed the explanation goes the other way around. We must appeal to a speaker's linguistic competence in order to explain his knowledge of truth conditions. We must also appeal to the speaker's knowledge of what truth is. No great insight about linguistic competence is involved, only a little insight about truth, the so-called redundancy theory of truth.

The redundancy theory of truth points to such truisms as that *snow is white* is true if and only if snow is white, that *grass is white* is true if and only if grass is white, and so forth. Modified to allow for demonstrative reference it notes that *he is sick* is true of an indicated male at a time if and only if that person is sick at that time, that *it is raining* is true of a place and time if it is raining at that place and time, and so forth. But these are points about truth rather than about meaning. Consider a speaker's knowledge of the fact that *snow is white* is true if and only if snow is white. That knowledge typically presupposes the speaker's knowledge of what *snow is white* means along with that much knowledge about truth as is captured by the redundancy theory of truth. It is definitely not the case that (normally) a speaker knows what *snow is white* means because he knows that the sentence is true if and only if snow is white. Knowledge of meaning is not to be explained as knowledge of truth conditions because one knows meaning and the redundancy theory of truth. [I discuss these issues in more detail in my "Meaning and Semantics" (in Milton K. Munitz and Peter K. Unger, eds., *Semantics and Philosophy*, New York University Press, 1974).]

I have been considering an argument for the claim that reference to possible worlds plays a role in explaining linguistic competence. We were interested in the argument because it promised a last ditch defense of universal semantic representations, where these were taken to be complicated constructs out of possible worlds and functions. The argument for the usefulness of possible worlds was to go like this. First, it was to be argued that linguistic competence consists in part in a knowledge of truth conditions. Second, it was to be shown that the relevant truth conditions involve possible worlds. We have just seen how this argument breaks down at the very first step by mistaking the redundancy theory of truth for a theory of meaning or linguistic convention. This is enough to undermine the argument and, since that is the only relevant argument that has ever been given, it is enough to undermine the conclusion that reference to possible worlds plays a role in the explanation of linguistic competence. But to reinforce this rejection of a universal system of semantic representation based on a theory of possible worlds, it is useful to consider the second stage of the argument that I have been examining.

So, let us agree that to know the meaning of a certain kind of sentence is to know under what conditions it could be used to say something true. Let us ignore the point that this involves not just linguistic competence in general but also enough knowledge about truth as is revealed by the redundancy theory of truth. And let us consider the claim that in general the relevant truth conditions involve possible worlds.

A speaker of English knows that *snow is white* is true if and only if snow is white. What is added if one says that a speaker knows that *snow is white* is true in a possible world if and only if snow is white in that world? Obviously, what is added depends on what is meant by the phrase "in that world."

A speaker of English knows that *it is raining* is true said at a particular place and at a particular time if and only if it is raining at that place and that time. Here we can suppose that the speaker knows that there are various places and various times and that it may or may not be raining

at a given place at a given time. Are we to suppose that a typical speaker of English also believes that there literally are various possible worlds, just as there literally are various places and times, and that in some of these worlds snow is white whereas in others it is not? Are we to suppose that the speaker believes in various possible worlds just as he believes in various different planets, for example, so that a possible world is as it were another place, another universe, unreachable from this one, existing perhaps in other dimensions? I am of course aware that certain philosophers and perhaps even some linguists do think of possible worlds in this way, as something like places. But surely this sort of bizarre metaphysical view cannot be ascribed to a typical speaker of English.

We want to know about a typical speaker's conception of a possible world or, if you like, a possible situation. In particular, we want to know how to interpret the word *in* when one speaks of something's being the case "in" a possible world or situation, for example, when one says that there is a possible world (situation) in which snow is green.

I suggest that the word *in* is here used as when we say that something happens "in" a story. For example, Jonah was swallowed by a big fish in the Bible. That is not to say that there is a place at which Jonah was swallowed by a big fish (for it never really happened).

A possible world or situation is a possible or consistent story. To say that there is a possible world or situation in which snow is green is to say that there is a possible or consistent story in which snow is green. A speaker knows that *snow is white* is true in a possible world if and only if snow is white in that world. In other words, a speaker knows that *snow is white* is true in a possible story if and only if snow is white in that story. Here there is no insight about linguistic competence and universal semantics. There is only the same old point about the redundancy theory of truth.

Remarks on the Lexicography of Performative Verbs

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At several places in *How to Do Things with Words* (1962), Austin speaks of the importance of compiling a comprehensive list of performative verbs, or alternatively, of illocutionary forces,[1] and in Lecture XII he sets up a five-way categorization of performative verbs and gives long lists of representatives of each category. Austin evidently regarded the tabulation and classification of performative verbs and illocutionary forces as important principally because of the inherent interest of the question, What can people do with words? I regard such tabulations as important because of their relation to a somewhat different question--What determines which verbs are or can be performative and what determines what illocutionary forces are possible? My concern is not for tests to determine whether, for example, the verb *criticize* can be used performatively (Austin provided an excellent treatment of that problem) but rather with determining, for example, what it is about *accuse* that makes it possible to use it performatively and what it is about *know* that makes it impossible to use it that way. Why is it that verbs such as *shout* and *whisper*, which can be used to report speech acts, cannot be used performatively?[2] Is it possible for two verbs to have the same meaning but for only one of them to be usable performatively? Or can one predict from the meaning of a verb whether it can be used performatively? To put the matter slightly differently, as one learns his native language, does one have to learn separately for each verb whether it can be used performatively, or does one automatically know whether he can use a verb performatively once he has learned what it means? I am fairly convinced that the meaning of a verb does, in fact, completely determine whether it can be used performatively; however, I am much less sure of what the relationship is between semantic structure and performativity. Are there, for example, a small number of "basic" performative predicates, such that the meaning of any performative is one of those predicates combined in various ways with other elements of meaning? If so, then what is it about those predicates which makes them bearers of performativity?

I am in addition interested in the relationship (if any) between Austin's classification of performative verbs and the concept of lexicon which figures in the linguistic theory--generative semantics--which I will assume in this paper. Austin's informal characterizations of the various classes of performative verbs can in some cases be interpreted as references to the logical structure of sentences involving those verbs, as, for example, when he states that an exercitive is the giving of "a decision that something is to be so, as distinct from a judgement that it is so." This can be interpreted as a distinction between the kinds of complement

clauses that appear in the semantic structure of verdictive clauses and exercitive clauses.

Austin's five categories of performatives, with his informal characterizations of them, are as follows:

(1) Verdictives: "Verdictives are typified by the giving of a verdict... " (150); "Verdictives consist in the giving of a finding, official or unofficial, upon evidence or reasons as to value or fact..."(152).

(2) Exercitives: "Exercitives are the exercising of powers, rights, or influence" (150); "An exercitive is the giving of a decision in favour of or against a certain course of action, or advocacy of it" (154).

(3) Commissives: "Commissives are typified by promising or otherwise undertaking" (150); "The whole point of a commissive is to commit the speaker to a certain course of action" (156).

(4) Behabitives: "Behabitives are a very miscellaneous group, and have to do with attitudes and social *behaviour*" (151); "Behabitives include the notion of reaction to other people's behaviour and fortunes and of attitudes to someone else's past conduct or imminent conduct" (159).

(5) Expositives: "[Expositives] make plain how our utterances fit into the course of an argument or conversation, how we are using words..." (151). "Expositives are used in acts of exposition involving the expounding of views, the conducting of arguments, and the clarification of usages and of references" (160).

None of these passages just quoted comes close to being a real definition, and in some cases they clash sharply with his evident intention; for example, most of the verbs that he lists as exercitives have nothing to do with any "course of action," e.g. *appoint*, *baptize*, and *excommunicate*. Only ironically could one say that Nixon "advocated a certain course of action" by appointing Rehnquist to the Supreme Court. Nevertheless, the examples that Austin gives of each category, along with his comments on the distinctions among the five categories, show rather clearly what the basis of the categorization is.

Vendler (1972) argues convincingly that "Exercitives" include two clearly distinct subclasses, one which he calls "operatives" and another for which he retains the name "exercitives." "Operatives" refer to acts by which the speaker makes something the case, e.g. appointing Gene Autry ambassador to France brings it about that Gene Autry is ambassador to France, and excommunicating Bing Crosby brings it about that Bing Crosby is not a member of the Catholic Church. Vendler's "exercitives" refers to acts by which one orders, requests, advises, etc. a person to do something. Separating out the operatives makes Austin's characterizations of "exercitive" less glaringly inadequate (although those characterizations do not really fit Vendler's exercitives either): ordering someone to shine your shoes can hardly be described as "giving a decision in favor of ... or advocacy of" his shining your shoes.

The following lists illustrate Austin's other four categories, plus the two categories into which Vendler divided Austin's exercitives. I have subdivided Vendler's exercitives still further, for reasons to be given below. I have supplemented Austin's lists with extra verbs, deleted some items which are clearly not performative, and shifted around some items which I think he misclassified.

Verdictives: accuse, acquit, analyze, appraise, ascribe, calculate, call,

characterize, charge (a person with a crime), convict, credit, date, denounce, describe, diagnose, estimate, evaluate, find, grade, guess, hold, interpret as, locate, make it, measure, place, put (it) at, rank, rate, read (it) as, reckon, rule, take it, understand, value.

Operatives: abdicate, accept (an application), adjourn, annul, appoint, authorize, award, baptize, bequeath, call to order, cancel, charge (a person with a task), choose, christen, claim, concede, condemn (to death, etc.), countermand, declare (open, closed, the winner, ...), decree, dedicate, degrade, demote, deputize, dismiss, disown, dub, enact, enter (a plea of insanity), excommunicate, exonerate, fine, forgive, give, grant, levy, name, nominate, offer, ordain, overrule (an objection), pardon, permit, proclaim, pronounce (man and wife), quash, reinstate, release, repeal, reprieve, rescind, sentence, sustain (an objection), veto, vote.

Exercitives: (a) Imperatives: admonish, beg, caution, command, demand, direct, entreat, forbid, implore, insist, order, plead, pray, request, supplicate. (b) Advisories: advise, advocate, counsel, propose, recommend, suggest, urge, warn.

Commissives: adopt, agree to, accept, apply for, assure, bet, bind myself, challenge, condemn (someone's actions), consent, contemplate, contract, covenant, dare, it's a deal, defy, declare for, declare my intention, dedicate myself to, embrace, engage, envisage. espouse, express my intention/support/opposition, favor, give my word, guarantee, intend, invite, mean to, oppose, order (food, etc.), plan, plead (guilty), pledge (myself), promise, propose to, purpose, shall, side with, surrender, swear, undertake, vow, warn.

Behabitives: apologize, applaud, approve, bid farewell, blame, bless, commend, commiserate, complain of, compliment, condole, congratulate, curse, don't mind, drink to, express my regrets/gratitude/admiration/..., felicitate, forgive, greet, overlook, protest, salute, sympathize, thank, toast, welcome, wish (a happy birthday, ...).

Expositives:
1. admit, affirm, announce, characterize, claim, class, declare, deny, describe, disagree, guess, identify, insist, maintain, predict, state, submit, suggest.
2. interpose, mention, note, observe, remark.
3. answer, apprise, inform, rejoin, remind, repeat, reply, respond, tell, warn.
3a. ask, inquire, query, wonder.
4. admit, confess, conjecture, report, swear, testify.
5. accept, agree that, concede, demur to, object to, protest, recognize, retract, repudiate, take back, withdraw.
5a. correct, revise.
6. argue, assume, conclude that, deduce, emphasize, neglect, postulate, stipulate.
7. begin by, conclude by, digress, first (second, third, ...), in conclusion, turn to.
7a. analyze, define, distinguish, interpret.
7b. explain, formulate, illustrate.
7c. call, refer, regard as, understand.

Austin's classification would receive strong support if it could be shown that membership in each category corresponded to a specific pattern

of syntactic behavior. The following are the principal syntactic phenomona that I know of on which performative verbs differ from one another.[3] In some cases practically all of the things assigned by Austin to a particular class behave alike, and the exceptions are things which on other grounds might be held to belong to another category. For example, *acquit*, which Austin calls a verdictive, might be held instead to be an operative, and indeed it is similar to operatives and unlike verdictives in that it cannot be used performatively with *would*: saying (1a) cannot be an act of acquitting, though saying (1b) can be an act of estimating:[4]

(1) a. I would acquit Dean of the charge.
b. I would estimate that the repairs will cost $200.00.

However, in some cases the test cuts across one of Austin's (or Vendler's) categories, as indicated in the following table.[5]

	Can be used performatively				
	in passive	with *would like to*	with *would*	with *will*	with *let me*
Verdictive	*/OK	*	OK	OK	?
Operative	OK	*	*	*	*
Advisory	OK	OK	OK	OK	OK
Imperative	OK/*	*	*	*	*
Commissive	*/OK	OK	*	*	OK
Behabitive	*	OK	*	*	OK
Expositive 1	*	OK	OK	*	OK
2	*	OK	OK	OK	OK
3	*	OK	OK	OK	OK
3a	*	OK	OK	OK	OK
4	*	OK	OK	OK	OK
5	*	OK	OK	OK	OK
5a	*	OK	OK	OK	OK
6	*	OK	OK	OK	OK
7	*	OK	*	OK	OK
7a	*	OK	OK	OK	OK
7b	*	OK	OK	OK	OK
7c	*	OK	OK	OK	*

The possibility of using a passive performatively apparently hinges on a characteristic that is irrelevant to Austin's classification, namely whether the act can be performed as an "official," "impersonal" act. It is probably that characteristic which makes it impossible to use a behabitive performatively[6] (*"You are hereby thanked for the lovely dinner you cooked last night*). Regarding the other phenomona, the only category of Austin-Vendler's in which there is a great amount of non-uniformity is the exercitives. One subject of exercitives consists of acts of advising and is almost exactly singled out by the property of allowing both *would* and *would like to* when used performatively, though that property is shared by *request*. One systematic difference between what I have labeled as "Advisories" and "Imperatives" above, and one for which even *request* behaves like an imperative rather than like an advisory, is that *ask* can be used to report imperative acts[7] but not advisory acts. If someone orders you to shine his shoes or begs you to shine his shoes, he asks you to shine his shoes. If he forbids you to shine his shoes, he asks you not to shine his shoes. While it might be more usual to report the latter as his having

told you not to shine his shoes, the following shows *ask* to be applicable:

(2) Did he ask you not to shine his shoes?
  a. Yes, indeed he forbade me to shine them.
  b. *No, (but) he forbade me to shine them.

However, advising, recommending, etc, is not asking:

(3) Did he ask you to shine his shoes?
  a. *Yes, indeed he advised me to shine them.
  b. No, but he advised me to shine them.
  c. Yes, and he also advised me to shine them.

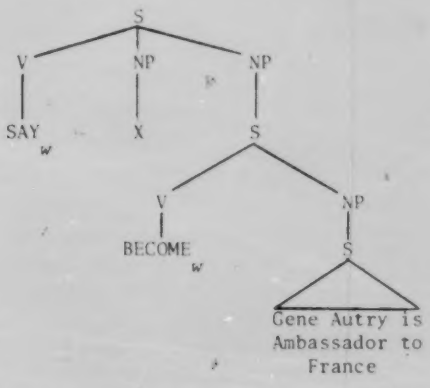
I wish now to take up the question of whether the seven classes of performative verbs that I have arrived at each exemplify some general semantic structure, and more importantly, whether such a semantic structure also provides a sufficient condition for a verb to be of the class in question. I note that both Austin and Vendler have provided necessary conditions on the semantic structure of verbs of various categories, e.g. that verdictives must have a complement that is in the indicative mood; this must be interpreted as a condition on semantic structure rather than on surface structure, in view of verbs such as *value* (e.g. *I value this vase at $300.00*) which do not have a surface complement but correspond to a semantic structure such as "I state that this vase is worth $300.00."

Operatives are in the class for which it is most obvious what the verbs have in common and what makes them performative. An operative speech act is an act in which the speaker makes something the case by saying that it is to be the case, e.g. it makes Gene Autry ambassador to France by saying that Gene Autry is to be ambassador to France or it makes Bing Crosby cease to be a member of the Catholic Church by saying that Bing Crosby is no longer a member of the Catholic Church. In almost all cases, the operative verb incorporates part of the meaning of a complement clause; *decree* is the only one for which the complement appears intact in surface structure. To a large extent, felicitous utterances in which *decree* is used performatively can be reported using more specific operatives, e.g. a felicitous utterance of (4a) can be reported by (4b):

(4) a. I decree that Bing Crosby is no longer a member of the Catholic Church.
  b. The Pope excommunicated Bing Crosby.

However, decrees (and operative acts in general) form a proper subset of acts in which something is made the case by saying that it is to be the case. A person who possesses magic powers may be able to cause Richard Nixon to have two heads by saying "Richard Nixon has two heads" or "Let Richard Nixon have two heads," but such an act is not an operative act, nor any other kind of illocutionary act, nor is the appearance of a second head on Nixon's shoulders a perlocutionary effect,[8] even though it conforms to definitions of "perlocutionary effect" that are sometimes offered. It will not do just to say that an operative act is an act of making something the case by saying that it is (to be) the case. The relationship of the act of saying the sentence and the event of Gene Autry becoming ambassador to France, or of your nephew ceasing to be your heir, or of Mr. Birnbaum ceasing to have a job in your firm is not one of causation but of inclusion, perhaps even of identity. At the moment, I have thought of no better way of representing this relationship than in terms of referential indices, where event verbs have referential indices and the predicate of

saying has the same index as does the verb of becoming, for example:[9]



Imperatives and commissives also make something the case by saying that it is to be the case, though what they make the case is not something that is describable by the apparent complement sentence. When you order someone to shine your shoes, you are not causing him to shine your shoes; however, you are causing him to owe you a shoeshine. Assuming that the order is felicitous (i.e. that you are in a position to issue orders to that person and that he hears and understands the order), he is in debt to you and will remain in debt until either he discharges the obligation by shining your shoes or you relieve him of the obligation by canceling your order. If you promise someone to mow his lawn on Saturday, you bring it about that you owe him an act of mowing his lawn on Saturday, and, as before, you remain in his debt until either you discharge the obligation or he relieves you of it. Imperatives and commissives do not always create debts, but they create some kind of commitment on the part of the speaker and/or on the part of some affected person. Imperatives divide into two types: those which cause the person to whom they are addressed to owe the speaker an act of the type in question (*admonish, caution, command, direct, forbid, order*), and those which commit the person to whom they are addressed to considering the request and commit the speaker to being grateful if the request is complied with (*beg, entreat, implore, plead, pray, request, supplicate*). Additionally, there are two verbs which do not really fit into either class (*demand* and *insist*) and wherein the speaker believes the addressee to be unwilling to do what he ought to do.

I propose that the logical structure of imperative and commissive clauses is similar to that of operative clauses, with the embedded clause specifying the debt, commitment, etc. which the corresponding act would bring about, e.g. the semantic structure of *I promise to mow your lawn on Saturday* would be along the lines of "I say$_w$ that it comes$_w$ about that I owe you mowing your lawn on Saturday."

I should now talk about advisories, but I have hardly anything to say about them. There are three really hard core advisories: *advise, counsel,* and *recommend.* These three verbs (though not the other verbs that I have called advisories) have the interesting property of allowing the preposition *against*:

(5) a. Bill advised me against bombing the Treasure Building.
b. The lawyer counseled Mrs. Schwartz against demanding custody of the pelican.

c. Spiro recommended against Nixon appointing Gene Autry ambassador to France.

This might be taken as suggesting that these verbs involve advocacy; however, as Searle (1969) has pointed out, they do not involve quite that, since they refer to acts in which the speaker takes the addressee's point of view: "If I were you, I wouldn't bomb the Treasury Building." There is nothing insincere about advising a person to do something that the giver of the advice wants him not to do. Good advice is advice which would benefit the recipient if followed, not the giver. *Urge* and *advocate*, on the other hand, take the speaker's point of view. The appropriate semantic structure may very well be something like "I tell you that for you to do X would be good for you" in the case of *advise, counsel,* and *recommend*, and "I tell you that for you to do X would be good for me" or just plain "... would be good" in the case of *advocate* or *urge*. However, I can offer nothing of substance to back up this suggestion.

It is interesting to ask whether Austin and Vendler were simply in error when they lumped advisories and imperatives together. Do these classes have any more in common with each other than with commissives or expositives? One important thing, not to my knowledge so far noted, which they have in common and share with nothing else is that they can be used as parentheticals with sentences that are grammatically imperative:

(6) a. Shine my shoes, I command you.
b. Please raise my pay, I implore you.
c. Don't ask for the custody of the pelican, I advise you, Mrs. Schwartz.
d. Appoint Frank Sinatra director of the FBI, I urge you, Mr. President.

The discussion in Searle (1977) clarifies what is at the bottom of the similarity between advisories and imperatives: they are the kinds speech acts where the "point" of the act is to get the addressee to do the thing in question. When successful, an imperative act gets the addressee to do the thing in question because it is the speaker's desire, and an advisory act gets him to do it because it is good (for him, or for the speaker, or just plain good). However, at the moment I do not see how to incorporate Searle's notion of "point" into the system of semantic representation that I have been using.[10]

I now turn to behabitives. Surface appearances to the contrary, wishing a person a happy birthday does not consist in expressing a wish that his birthday will be happy. Indeed, telling a person that you hope he will enjoy his birthday does not really constitute wishing him a happy birthday.[11] In wishing a person a happy birthday, one is acknowledging that it is (or soon will be) that person's birthday and that one owes the person that acknowledgement. Likewise, congratulating a person on his promotion does not consist in telling him that you are glad that he was promoted; for example, you don't congratulate a person by saying, "I'm glad that you were promoted, since that means that you will be able to pay me the money you owe me." On the other hand, saying, "I'm delighted that you were promoted" *can* be an act of congratulating if it is done for the right reasons. In congratulating, as in most behabitive acts, the speaker is not simply informing the addressee of his feelings but is expressing those feelings (or feigned facsimiles of feelings) as an act of homage to the addressee. To congratulate a person for something is not to inform him that you are glad about it, and to thank a person for something is not to inform him that you are grateful for it, since to inform a person of something it is

necessary that he not yet know it, whereas to congratulate or thank a person it is irrelevant whether he already knows that you are glad or that you are grateful. Indeed, if a person says, "I'm very happy that you were promoted," meaning to congratulate you, it would be not merely rude but a non sequitur for you to reply "I already know that."

My best guess as to the semantic structure of behabitives is that they are benefactive constructions, e.g. that "I thank you for helping me" means something like "I offer to you my statement that I am grateful to you for helping me." This would make behabitives a special case of whatever class of performative verbs *give* and *offer* (as in *I offer you these flowers as a token of my esteem*) belong to. Operative and commissive are the only obvious possibilities, and I think *give* and *offer* make clear that no real line can be drawn between operatives and commissives: acts of giving and offering bring about something which is only somewhat a commitment on the part of the speaker (namely the commitment to give up any claim on the disposition of the gift; in the case of *offer*, this commitment is contingent upon the benificiary's accepting it).

The above sketch will not fit some verbs which Austin included, to my mind incorrectly, under behabitives: *challenge, dare, defy*. Those three verbs should perhaps be called commissives, since they amount to bets ("I bet that you won't have the guts/ability/chutzpah/... to X").

Austin's observations about verdictives, as contrasted with exercitives and commissives, amount to saying that in semantic structure verdictives involve a complement in the indicative mood (i.e. something which purports to be true or false), whereas exercitives and commissives involve some other kind of complement. For example, *I diagnose Mrs. McGonigle's disease as cirrhosis of the liver* has a semantic structure involving the proposition that Mrs. McGonigle's disease is cirrhosis of the liver, and it is appropriate to respond to a verdictive utterance by expressing agreement or disagreement with that proposition. This contrast can be seen in adjuncts which modify the embedded clause:

(7) a. Harry estimated that the repairs would cost $200, which was true/correct.
b. Harry ordered Susan to kiss him, which was true/correct.

This characteristic is shared with expositives (except for subclasses 3a and 7), and the question arises as to whether there is a systematic difference between verdictives and expositives. That there is a systematic difference is suggested by the fact that, quite generally, verdictives do not allow *would like to* or *let me* when used performatively, whereas expositives do. I think the following fact gives a clue as to the difference. It is much easier to imagine a situation in which (8a) would be appropriate than a situation in which (8b) would be:

(8) a. Since Mrs. McGonigle was admitted to the hospital, Dr. Novotny has stated fifty times that she is suffering from cirrhosis of the liver.
b. Since Mrs. McGonigle was admitted to the hospital, Dr. Novotny has diagnosed her ailment fifty times as cirrhosis of the liver.

(8a) suggests that Dr. Novotny has held a single opinion steadfastly since he first examined Mrs. McGonigle. (8b) suggests that he has recurring doubts or that the other doctors keep challenging him, and that he keep reexamining her, only to keep arriving at the same diagnosis. When a doctor diagnoses a patient's ailment, he puts his judgement of the patient's ailment into the record. He can make a new diagnosis only when his pre-

vious diagnosis has been rendered no longer part of the record (for example, because of his coming to doubt his earlier judgement) and there is again an empty space in "the record" for his judgement. But one can state something regardless of whether he is already on the record as holding the view which he states. In this respect, assuming that *diagnose* is typical of verdictives and *state* of expositives, then verdictives behave like operatives, imperatives, advisories, and commissives, whereas expositives behave like behabitives. I can thank you for helping me even if I have already thanked you (indeed, one often says things like *Thanks again for helping me*). However, the Pope can excommunicate Bing Crosby again only if Crosby has in the meantime made amends and has once more become a Catholic in good standing. Similarly, I can order you again to shine my shoes only if the earlier order is no longer in force (because you have discharged it or I have withdrawn it or the deadline for your obeying it has elapsed); I can advise you again to change all your dollars into yen only if either I have withdrawn my earlier advice or the situation has changed so as to render my earlier advice inapplicable; and I can promise you again to proofread your article only if you have relieved me of the obligation which I had originally contracted. This suggests that verdictives have a semantic structure along the lines of "I say$_w$ that it comes$_w$ about that it is on the record that I believe that *S*."

My remark that Dr. Novotny can state fifty times that Mrs. McGonigle is suffering from cirrhosis of the liver, without his having changed his mind or anything else having happened, implies that expositives, at least insofar as *state* is typical of them, are not causatives, whereas verdictives, operatives, imperatives, advisories, and commissives are. Actually, there are some verbs which Austin classes as expositives which appear to be causatives, particularly in his subclasses 5 and 5a. *Correct, repudiate, retract, revise, take back,* and *withdraw* are of interest because of their relationship to illocutionary acts of other types: you can correct an estimate or repudiate a diagnosis, for example. These verbs all mean something like "cause oneself to cease to be on record as holding that S" (or in the case of *correct* and *revise*, "cause oneself to be on record as holding that S_1 instead of being on record as holding that S_2"). However, this leaves a significant mystery: if they have semantic structures like verdictives or operatives, why do they allow *would like to* and *let me* when used performatively, which expositives normally allow but verdictives and operatives do not?

There are two other subclasses of Austin's expositives which are grossly different from the rest: the interrogative verbs (group 3a) and the discourse structure verbs (group 7). Other expositives take indicative declarative complements. However, group 3a takes dependent questions as complements and group 7 takes performative complements (indeed, generally expositive or behabitive complements), except for *turn to*, which does not take a complement but a NP that describes the next point on the "agenda:"

(9) a. I would like to begin by asking whether you subscribe to *Mad Magazine*.
b. Let me conclude by expressing my gratitude to the wonderful people who invited me here.
c. I now turn to the question of whether performative deletion involves an essential variable.

It seems obvious to me that the items in group 7 are the same ones which appear in such sentences as:

(10) a. Dr. Novotny began the operation by making an incision in Mrs. McGonigle's right earlobe.

b. John Gage concluded his performance by pouring coffee into a cello while four scantily clad girls turned the pegs and plucked the strings.

Sentences such as (9b) have a deleted object which refers to whatever undertaking the utterance is being conceived as part of (a speech, an argument, etc.). It is my conjecture that these sentences have the same semantic structure as sentences with non-restrictive clauses as in:

(11) Dr. Novotny made an incision in Mrs. McGonigle's right earlobe, which [=Dr. Novotny's making the incision] was the beginning of the operation.

This proposal is attractive in that it at least allows one to say that in semantic structure the embedded performative in (9b) is not embedded, i.e. that "My expressing gratitude...is the conclusion (of this talk)" would be external to "I express gratitude..." in the semantic structure of (9b). The exact details of this proposal would depend on an account of non-restrictive clauses, a topic which is of considerable relevance here since, as has been pointed out many times, a non-restrictive clause has its own illocutionary force over and above whatever illocutionary force the sentence to which it is adjoined has.

There is reason to propose a similar analysis for *answer, rejoin, reply,* and *respond* (group 3). Note that these verbs can also be used with embedded performatives:

(12) a. I would reply by stating that political offices in Chicago are hereditary.
b. Let me respond by asking whether your premises are consistent.
c. I'd like to answer by denying that I have ever supported minimum wage laws.

It is my conjecture that in sentences like (13) an embedded performative has been deleted:

(13) a. I would reply that political offices in Chicago are hereditary.
b. I'd like to answer that I have never supported minimum wage laws.

Putting this conjecture together with that of the last paragraph, it would be logical to conjecture that *X reply to Y that S* would have a logical structure along the lines of "X say$_w$ to Y that S, and X's doing w is a reply to (what Y asked)," or whatever analogue to this best fits what is known about non-restrictive clauses. The deletion of an embedded performative such as in (13) may also be involved in sentences such as:

(14) I repeat that I have to leave by 11:30.,

though *repeat* evidently involves a different semantic structure than does *reply*.

I have so far been commenting on relatively atypical expositives and have had hardly anything to say about such garden-variety expositives as *state, declare,* and *remark*, primarily because I have, in fact, very little to say about them. Their meanings all seem to involve "I say that S," but I have no clear picture of what else they involve and how they differ from

one another, except that it is clear that they differ in all sorts of ways. For example, when used non-performatively, *mention* is factive but *state* is not, as the following examples illustrate:[14]

(15) a. Did Prof. Schwartz state/mention that the moon revolved about the sun?
b. Prof. Schwartz didn't state/mention that the moon revolves about the sun.

In any event, it appears that the performativity of garden-variety performatives belongs to the "say" part of their meanings. Further investigation of what else may be involved in the meaning should also take into account Austin's important observation that expositives "make plain how our utterances fit into the course of an argument or conversation," a point that I have not done justice to here.

I have given a sketch of performative verbs here, and I think that in the course of it I have gotten a lot closer to the answer to one of the questions with which this paper began, namely that of what makes performative verbs performative. Specifically, the performativity seemed to be attributable in each case to one of two things. Verdictives, operatives, imperatives, advisories, and commissives all refer to a linguistic act and something that comes about as part of that act. Most behabitives and expositives refer to acts of saying that S, with the meaning of the verb being allowed to incorporate motives, etc. Verbs such as *begin* and *conclude* were suggested to be not really performative themselves but to be non-restrictive clauses which can combine with a wide range of performatives. I regard it as fairly plausible that these two characteristics are the only bearers of performativity, though it will take a lot of serious and detailed lexicography to establish that. It is of interest that I have ended up with two sources of performativity rather than one, since the two kinds of illocutionary acts that they correspond to are fairly close matches to what Austin called "performative" and "constative." The performative-constative distinction thus may be alive and well after all, though taking a quite different form from what Austin considered, since, for example, my analysis allows for the possibility of a clause being both constative and performative at the same time, as in the case of behabitive acts, in which one is generally both stating something and offering the act of stating it.

FOOTNOTES

[1] These two tasks do not differ greatly, since to every performative verb there corresponds an illocutionary force which utterances in which the verb is used performatively have. The two tasks differ principally in that (a) distinct performative verbs may be synonymous and thus correspond to the same illocutionary force, and (b) there can be illocutionary forces to which no performative verb corresponds, as in the case of "echo-questions" (*You tried to burn down what?*) and exclamations (*Boy am I hungry!*; see N. McCawley 1973), which are distinct types of speech acts but correspond to no performative verb.

[2] This observation is due to Zwicky (1971).

[3] See Fraser (1974) for a more detailed treatment of syntactic differences among performative verbs.

[4] That saying (1b) can be an act of estimating is shown by the fact that it can be reported as "He *then* estimated that the repairs would cost $200," with the reference of *then* being the time of the speech act.

[5] Since this table purports to summarize over 1,000 grammaticality

judgements, it should not be taken too seriously.

[6] Other than *forgive*, which might be held to be an operative anyway.

[7] In the discussion below, I will not only refer to verdictive verbs, commissive verbs, etc. but to verdictive speech acts, commissive speech acts, etc., by which I will mean illocutionary acts which can be described by a verdictive verb, by a commissive verb, etc. Actually, this is upside-down: I should define "verdictive act" directly and define "verdictive verb" as a verb which describes a verdictive act.

[8] Or at least, I take Austin to have intended his term "perlocutionary effect" only to cover effects in the addressee which come about as a result of his understanding what was said.

[9] One important respect in which this approximate semantic structure is inadequate is that it fails to indicate any relationship of the speech act to "the record." Nixon cannot appoint Autry ambassador to France simply by saying to him in private "I hereby appoint you ambassador to France"; the act of appointing must involve somehow making the President's decision a matter of record. This is true even if the bizarre case of the Pope creating cardinals *in pectore*. What makes Bishop X a cardinal is not the Pope's decision that he should be a cardinal but his incorporating that decision into the celestial record by communicating it to the celestial record-keeper, God Himself.

[10] Another important class of sentences which are imperative in form and whose point is to get the addressee to do the thing in question is printed instructions (see Sadock [1974] for further discussion of them) such as "Just add water and mix to a creamy consistency." However, not all sentences of imperative form have the point of getting the addressee to perform the action in question, e.g. "Take one more step and I'll shoot."

[11] Nor, indeed, does saying, "I wish you an enjoyable birthday."

[12] This example refutes the occasionally encountered proposal that the complement of *order* is simply a future indicative clause. If such were the case, there would be no obstacle to deriving (7b) from a structure that contained two occurrences of *Susan will kiss Harry*, since *It is true that Susan will kiss Harry* is grammatical. Note that the infinitive form poses no obstacle to a non-restrictive clause: *Napoleon claimed to be a great general, which was true.*

[13] One important verb which Austin classes as a verdictive but probably should be considered an operative is *accuse*. As I have pointed out (1974), an accusation is not simply a statement that a person did some evil deed; it is made in order to create a situation of jeopardy, i.e. a situation in which the person accused must defend himself successfully against the charge if he is to avoid some punishment. If you tell a person that, under the influence of some evil weed, he has raped and strangled his mother, you aren't accusing him if you are telling him simply to inform him and thereby help him avoid getting caught by the police, though you are accusing him if you are his mother's lover and are about to revenge yourself upon him unless he quickly comes up with an alibi.

[14] Curiously, there are acts of mentioning which do not allow performative use of *mention*. For example, if the point of your argument is that taxation is immoral, you cannot conclude the argument by saying *I mention that taxation is immoral*. However, in stating your conclusion in any normal way, you do mention that taxation is immoral, and if someone asked me whether you had mentioned that, I would have to answer that you had.

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A Classification of Illocutionary Acts

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I. Introduction.

The primary purpose of this paper is to develop a reasoned classification of illocutionary acts into certain basic categories or types. It is to answer the question: How many kinds of illocutionary acts are there?

Since any such attempt to develop a taxonomy must take into account Austin's classification of illocutionary acts into his five basic categories of verdictive, expositive, exercitive, behabitive, and commissive, a second purpose of this paper is to assess Austin's classification to show in what respects it is adequate and in what respects inadequate. Furthermore, since basic semantic differences are likely to have syntactical consequences, a third purpose of this paper is to show how these different basic illocutionary types are realized in the syntax of a natural language such as English.

In what follows, I shall presuppose a familiarity with the general pattern of analysis of illocutionary acts offered in such works as Austin, *How to Do Things with Words* (1962), Searle, *Speech Acts* (1969), and Searle, "Austin on Locutionary and Illocutionary Acts" (1968). In particular, I shall presuppose a distinction between the illocutionary force of an utterance and its propositional content as symbolized

$$F(p).$$

The aim of this paper then is to classify the different types of F.

II. Different Types of Differences between Different Types of Illocutionary Acts.

Any taxonomical effort of this sort presupposes criteria for distinguishing one (kind of) illocutionary act from another. What are the criteria by which we can tell that of three actual utterances one is a report, one a prediction, and one a promise? In order to develop higher order genera, we must first know how the species *promise, prediction, report,* etc. differ one from another. When one attempts to answer that question, one discovers that there are several quite different principles of distinction; that is, there are different kinds of differences that enable us to say that the force of this utterance is different from the force of that utterance. For this reason the metaphor of force in the expression "illocutionary force" is misleading, since it suggests that different illocutionary forces occupy

different positions on a single continuum of force. What is actually the case is that there are several distinct criss-crossing continua. A related source of confusion is that we are inclined to confuse illocutionary verbs with types of illocutionary acts. We are inclined, for example, to think that where we have two nonsynonymous illocutionary verbs they must necessarily mark two different kinds of illocutionary acts. In what follows, I shall try to keep a clear distinction between illocutionary verbs and illocutionary acts. Illocutions are a part of language as opposed to particular languages. Illocutionary verbs are always part of a particular language: French, German, English, or whatnot. Differences in illocutionary verbs are a good guide but by no means a sure guide to differences in illocutionary acts.

It seems to me there are (at least) twelve significant dimensions of variation in which illocutionary acts differ one from another and I shall--all too briskly--list them.

1. Differences in the point (or purpose) of the (type of) act.

The point or purpose of an order can be specified by saying that it is an attempt to get the hearer to do something. The point or purpose of a description is that it is a representation (true or false, accurate or inaccurate) of how something is. The point or purpose of a promise is that it is an undertaking of an obligation by the speaker to do something. These differences correspond to the essential conditions in my analysis of illocutionary acts in *Speech Acts* (Searle 1969, Ch. 3). Ultimately, I believe, essential conditions form the best basis for a taxonomy, as I shall attempt to show. It is important to notice that the terminology of "point" or "purpose" is not meant to imply, nor is it based on the view, that every illocutionary act has a definitionally associated perlocutionary intent. For many, perhaps most, of the most important illocutionary acts, there is no essential perlocutionary intent associated by definition with the corresponding verb, e.g., statements and promises are not by definition attempts to produce perlocutionary effects in hearers.

The point or purpose of a type of illocution I shall call its *illocutionary point*. Illocutionary point is part of but not the same as illocutionary force. Thus, for example, the illocutionary point of request is the same as that of commands: both are attempts to get hearers to do something. But the illocutionary forces are clearly different. In general, one can say that the notion of illocutionary force is the resultant of several elements of which illocutionary point is only one, though, I believe, the most important one.

2. Differences in the direction of fit between words and the world.

Some illocutions have as part of their illocutionary point to get the words (more strictly, their propositional content) to match the world, others to get the world to match the words. Assertions are in the former category; promises and requests are in the latter. The best illustration of this distinction I know of is provided by Miss Anscombe (1958). Suppose a man goes to the supermarket with a shopping list given him by his wife on which are written the words "beans, butter, bacon, and bread." Suppose as he goes around with his shopping cart selecting these items, he is followed by a detective who writes down everything he takes. As they emerge from the store, both shopper and detective will have identical lists. But the function of the two lists will be quite different. In the case of the shopper's list, the purpose of the list is, so to speak, to get the world to match the words; the man is supposed to make his actions fit the list. In the

case of the detective, the purpose of the list is to make the words match the world; the man is supposed to make the list fit the actions of the shopper. This can be further demonstrated by observing the role of "mistake" in the two cases. If the detective gets home and suddenly realizes that the man bought pork chops instead of bacon, he can simply erase the word "bacon" and write "pork chops." But if the shopper gets home and his wife points out he has bought pork chops when he should have bought bacon, he cannot correct the mistake by erasing "bacon" from the list and writing "pork chops."

In these examples the list provides the propositional content of the illocution, and the illocutionary force determines how that content is supposed to relate to the world. I propose to call this difference a difference in *direction of fit*. The detective's list has the *word-to-world* direction of fit (as do statements, descriptions, assertions, and explanations); the shopper's list has the *world-to-word* direction of fit (as do requests, commands, vows, promises). I represent the word-to-world direction of fit with a downward arrow thus ↓ and the world-to-word direction of fit with an upward arrow thus ↑. Direction of fit is always a consequence of illocutionary point. It would be very elegant if we could build our taxonomy entirely around this distinction in direction of fit, but though it will figure largely in our taxonomy, I am unable to make it the entire basis of the distinctions.

3. Differences in expressed psychological states.

A man who states, explains, asserts, or claims that p *expresses the belief that p*; a man who promises, vows, threatens, or pledges to do A *expresses an intention to do A*; a man who orders, commands, requests H to do A *expresses a desire (want, wish) that H do A*; a man who apologizes for doing A *expresses regret at having done A*; etc. In general, in the performance of any illocutionary act with a propositional content, the speaker expresses some attitude, state, etc. to that propositional content. Notice that this holds even if he is insincere; even if he does not have the belief, desire, intention, regret, or pleasure which he expresses, he nonetheless expresses a belief, desire, intention, regret, or pleasure in the performance of the speech act. This fact is marked linguistically by the fact that it is linguistically unacceptable (though not self-contradictory) to conjoin the explicit performative verb with the denial of the expressed psychological state. Thus one cannot say, "I state that p but do not believe that p," "I promise that p but I do not intend that p," etc. Notice that this only holds in the first person performative use. One can say "He stated that p but didn't really believe that p," "I promise that p but did not really intend to do it," etc. The psychological state expressed in the performance of the illocutionary act is the *sincerity condition* of the act, as analyzed in *Speech Acts*, Ch. 3.

If one tries to do a classification of illocutionary acts based entirely on differently expressed psychological states (differences in the sincerity condition), one can get quite a long way. Thus, *belief* collects not only statements, assertions, remarks, and explanations, but also reports, claims, deductions, and arguments. *Intention* will collect promises, vows, threats, and pledges. *Desire* or *want* will collect requests, orders, commands, askings, prayers, pleadings, beggings, and entreaties. *Pleasure* doesn't collect quite so many--congratulations, felicitations, welcomes, and a few others.

In what follows, I shall symbolize the expressed psychological state with the capitalized initial letters of the corresponding verb, the "B" for believe, "W" for want, "I" for intend, etc.

These three dimensions--illocutionary point, direction of fit, and sincerity condition--seem to me the most important, and I will build most of my taxonomy around them, but there are several others that need remarking.

4. *Differences in the force or strength with which the illocutionary point is presented.*

Both "I suggest we go to the movies" and "I insist that we go to the movies" have the same illocutionary point, but it is presented with different strengths. Analogously with "I solemnly swear that Bill stole the money" and "I guess Bill stole the money." Along the same dimension of illocutionary point or purpose there may be varying degrees of strength or commitment.

5. *Differences in the status or position of the speaker and hearer as these bear on the illocutionary force of the utterance.*

If the general asks the private to clean up the room, that is in all likelihood a command or an order. If the private askes the general to clean up the room, that is likely to be a suggestion or proposal or request but not an order or command. This feature corresponds to one of the preparatory conditions in my analysis in *Speech Acts*, Ch. 3.

6. *Differences in the way the utterance relates to the interests of the speaker and the hearer.*

Consider, for example, the differences between boasts and laments, between congratulations and condolences. In these two pairs, one hears the difference as being between what is or is not in the interests of the speaker and hearer respectively. This feature is another type of preparatory condition according to the analysis in *Speech Acts*.

7. *Differences in relations to the rest of the discourse.*

Some performative expressions serve to relate the utterance to the rest of the discourse (and also to the surrounding context). Consider, for example, "I reply," "I deduce," "I conclude," and "I object." These expressions serve to relate utterances to other utterances and to the surrounding context. The features they mark seem mostly to involve utterances within the class of statements. In addition to simply stating a proposition, one may state it by way of objecting to what someone else has said, by way of replying to an earlier point, by way of deducing it from certain evidentiary premises, etc. "However," "moreover," and "therefore" also perform these discourse relating functions.

8. *Differences in propositional content that are determined by illocutionary force indicating devices.*

The differences, for example, between a report and a prediction involve the fact that a prediction must be about the future, whereas a report can be about the past or present. These differences correspond to differences in propositional content conditions as explained in *Speech Acts*.

9. *Differences between those acts that must always be speech acts and those that can be, but need not be, performed as speech acts.*

For example, one may classify things by saying, "I classify this as an A and this as a B." But, one need not say anything at all in order to be classifying; one may simply throw all the A's in the A box and all the B's in the B box. Similarly with estimate, diagnose, and conclude. I may make estimates, give diagnoses, and draw conclusions in saying, "I estimate," "I diagnose," and "I conclude," but in order to estimate, diagnose, or conclude it is not necessary to say anything at all. I may simply stand before a building and estimate its height, silently diagnose you as a marginal schizophrenic, or conclude that the man sitting next to me is quite drunk. In these cases, no speech act, not even an internal speech act, is necessary.

10. Differences between those acts that require extra-linguistic institutions for their performance and those that do not.

There are a large number of illocutionary acts that require an extra-linguistic institution, and generally, a special position by the speaker and the hearer within that institution in order for the act to be performed. Thus, in order to bless, excommunicate, christen, pronounce guilty, call the base runner out, bid three no-trump, or declare war, it is not sufficient for any old speaker to say to any old hearer "I bless," "I excommunicate," etc. One must have a position within an extra-linguistic institution. Austin sometimes talks as if he thought all illocutionary acts were like this, but plainly they are not. In order to make a statement that it is raining or promise to come and see you, I need only obey the rules of language. No extra-linguistic institutions are required. This feature of certain speech acts, that they require extra-linguistic institutions, needs to be distinguished from feature 5, the requirement of certain illocutionary acts that the speaker and possibly the hearer as well have a certain status. Extra-linguistic institutions often confer status in a way relevant to illocutionary force, but not all differences of status derive from institutions. Thus, an armed robber by virtue of his possession of a gun may *order* as opposed to, for example, request, entreat, or implore victims to raise their hands. But his status here does not derive from a position within an institution but from his possession of a weapon.

11. Differences between those acts where the corresponding illocutionary verb has a performative use and those where it does not.

Most illocutionary verbs have performative uses, e.g., "state," "promise," "order," "conclude." But one cannot perform acts of, for example, boasting or threatening by saying, "I hereby boast," or "I hereby threaten." Not all illocutionary verbs are performative verbs.

12. Differences in the style of performance of the illocutionary act.

Some illocutionary verbs serve to mark what we might call the special *style* in which an illocutionary act is performed. Thus, the difference between, for example, announcing and confiding need not involve any difference in illocutionary point or propositional content but only in the *style* of performance of the illocutionary act.

III. Weaknesses in Austin's Taxonomy.

Austin advances his five categories very tentatively, more as a basis for

discussion than as a set of established results. "I am not," he says, "putting any of this forward as in the very least definitive" (p. 151). I think they form an excellent basis for discussion, but I also think that the taxonomy needs to be seriously revised because it contains several weaknesses. Here are Austin's five categories:

Verdictives. These "consist in the delivering of a finding, official or unofficial, upon evidence or reasons as to value or fact so far as these are distinguishable." Examples of verbs in this class are: acquit, hold, calculate, describe, analyze, estimate, date, rank, assess, and characterize.

Exercitives. One of these "is the giving of a decision in favor of or against a certain course of action or advocacy of it...", "a decision that something is to be so, as distinct from a judgment that it is so." Some examples are: order, command, direct, plead, beg, recommend, entreat, and advise. Request is also an obvious example, but Austin does not list it. As well as the above, Austin also lists: appoint, dismiss, nominate, veto, declare closed, and declare open, as well as announce, warn, proclaim, and give.

Commissives. "The whole point of a commissive," Austin tells us, "is to commit the speaker to a certain course of action." Some of the obvious examples are: promise, vow, pledge, covenant, contract, guarantee, embrace, and swear.

Expositives "are used in acts of exposition involving the expounding of views, the conducting of arguments and the clarifying of usages and references." Austin gives many examples of these; among them are: affirm, deny, emphasize, illustrate, answer, report, accept, object to, concede, describe, class, identify, and call.

Behabitives. This class, with which Austin was very dissatisfied ("a shocker," he called it), "includes the notion of reaction to other people's behavior and fortunes and of attitudes and expressions of attitudes to someone else's past conduct or imminent conduct."

Among the examples Austin lists are: apologize, thank, deplore, commiserate, congratulate, felicitate, welcome, applaud, critize, bless, curse, curse, toast, and drink. But also, curiously: dare, defy, protest, and challenge.

The first thing to notice about these lists is that they are not classifications of illocutionary acts but of English illocutionary verbs. Austin seems to assume that a classification of different verbs is *eo ipso* a classification of kinds of illocutionary acts, that any two non-synonymous verbs must mark different illocutionary acts. But there is no reason to suppose that this is the case. As we shall see, some verbs, for example, mark the manner in which an illocutionary act is performed, e.g., "announce." One may announce orders, promises, and reports, but announcing is not on all fours with ordering, promising, and reporting. Announcing, to anticipate a bit, is not the name of a type of illocutionary act, but the way in which some illocutionary act is performed. An announcement is never just an announcement. It must also be a statement, order, etc.

Even granting that the lists are of illocutionary verbs and not necessarily of different illocutionary acts, it seems to me one can level the following criticisms against it.

(1) First, a minor cavil, but one worth noting. Not all of the verbs listed are even illocutionary verbs. For example, "sympathize," "regard as," "mean to," "intend," and "shall." Take "intend:" it is clearly not performative. Saying, "I intend" is not intending; nor in the third person does it name an illocutionary act: "He intended..." does not report a speech act. Of course there is an illocutionary act of *expressing an intention*, but the illocutionary verb phrase is: "express an intention," not

"intend." Intending is never a speech act; expressing an intention usually, but not always, is.

(2) The most important weakness of the taxonomy is simply this: There is no clear or consistent principle or set of principles on the basis of which the taxonomy is constructed. Only in the case of Commissives has Austin clearly and unambiguously used illocutionary point as the basis of the definition of a category. Expositives, insofar as the characterization is clear, seem to be defined in terms of discourse relations (my feature 7). Exercitives seem to be at least partly defined in terms of the exercise of authority. Both considerations of status (my feature 5 above) as well as institutional considerations (my feature 10) are lurking in it. Behabitives do not seem to me at all well defined (as Austin, I am sure, would have agreed), but it seems to involve notions of what is good or bad for the speaker and hearer (my feature 6) as well as expressions of attitudes (my feature 3).

(3) Because there is no clear principle of classification and because there is a persistent confusion between illocutionary acts and illocutionary verbs, there is a great deal of overlap from one category to another and a great deal of heterogeneity within some of the categories. The problem is not that there are borderline cases--any taxonomy that deals with the real world is likely to come up with borderline cases--nor is it merely that a few cases will have the defining characteristics of more than one category; rather a very large number of verbs find themselves smack in the middle of two competing categories because the principles of classification are unsystematic. Consider, for example, the verb "describe," a very important verb in anybody's theory of speech acts. Austin lists it as both a verdictive and an expositive. Given his definitions, it is easy to see why: describing can be both the delivering of a finding and an act of exposition. But then any "act of exposition involving the expounding of views" could also in his rather special sense be "the delivering of a finding, official or unofficial, upon evidence or reasons." And indeed, a look at his list of expositives (pp. 161-2) is sufficient to show that most of his verbs fit his definition of verdictives as well as does describe. Consider "affirm," "deny," "state," "class," "identify," "conclude," and "deduce." All of these are listed as expositives, but they could just as easily have been listed as verdictives. The few cases which are clearly not verdictives are cases where the meaning of the verb has purely to do with discourse relations, e.g., "begin by," "turn to," or where there is no question of evidence or reasons, e.g., "postulate," "neglect," "call," and "define." But then that is really not sufficient to warrant a separate category, especially since many of these, "begin by," "turn to," "neglect," are not names of illocutionacy acts at all.

(4) Not only is there too much overlap from one category to the next, but within some of the categories there are quite distinct kinds of verbs. Thus Austin lists "dare," "defy," and "challenge," alongside "thanks," "apologize," "deplore," and "welcome" as behabitives. But "dare," "defy," and "challenge" have to do with the hearer's subsequent actions; they belong with "order," "command," and "forbid" both on syntactical and semantic grounds, as I shall argue later. But when we look for the family that includes "order," "command," and "urge," we find these are listed as Exercitives alongside "veto," "hire," and "demote." But these, again as I shall argue later, are in two quite distinct categories.

(5) Related to these objections is the further difficulty that not all of the verbs listed within the classes really satisfy the definitions given, even if we take the definitions in the rather loose and suggestive manner that Austin clearly intends. Thus "nominate," "appoint," and "excommunicate" are not "giving of a decision in favor of or against a certain course

of action," much less are they "advocating" it. Rather they are, as Austin himself might have said, *performances* of these actions, not *advocacies* of anything. That is, in the sense in which we might agree that ordering, commanding, and urging someone to do something are all cases of *advocating* that he do it, we cannot also agree that nominating or appointing is also advocating. When I appoint you chairman, I don't advocate that you be or become chairman, I *make* you chairman.

In sum, there are (at least) six related difficulties with Austin's taxonomy; in ascending order of importance: there is a persistent confusion between verbs and acts, not all the verbs are illocutionary verbs, there is too much overlap of the categories, there is too much heterogeneity within the categories, many of the verbs listed in the categories don't satisfy the definition given for the category, and, most important, there is no consistent principle of classification.

I don't believe I have fully substantiated all six of these charges, and I will not attempt to do so within the confines of this paper, which has other aims. I believe, however, that my doubts about Austin's taxonomy will have greater clarity and force after I have presented an alternative. What I propose to do is take illocutionary point, and its corollaries, direction of fit and expressed sincerity conditions, as the basis for constructing a classification. In such a classification, other features--the role of authority, discourse relations, etc.-- will fall into their appropriate places.

IV. Alternative Taxonomy.

In this section, I shall present a list of what I regard as the basic categories of illocutionary acts. In so doing, I shall discuss briefly how my classification relates to Austin's.

Representatives. The point or purpose of the members of representative class is to commit the speaker (in varying degrees) to something's being the case, to the truth of the expressed proposition. All of the members of the representative class are assessable on the dimension of assessment which includes *true* and *false*. Using Frege's assertion sign to mark the illocutionary point common to all and the symbols introduced above, we may symbolize this class as follows:

$$\vdash \downarrow B(p).$$

The direction of fit is words to the world; the psychological state expressed is Belief (that p). It is important to emphasize that words such as "belief" and "commitment" are here intended to mark dimensions; they are so to speak determinable rather than determinates. Thus, there is a difference between *suggesting* that p or *putting it forward as a hypothesis* that p, on the one hand, and *insisting* that p or solomnly *swearing* that p, on the other. The degree of belief and commitment may approach or even reach zero, but it is clear, or will become clear, that *hypothesizing that p* and *flatly stating that p* are in the same line of business in a way that neither is like requesting. Once we recognize the existence of *representatives* as a quite separate class, based on the notion of illocutionary point, then the existence of a large number of performative verbs that denote illocutions that seem to be assessable in the True-False dimension and yet are not just "statements" will be easily explicable in terms of the fact that they mark features of illocutionary force which are in addition to illocutionary point. Thus, for example, consider "boast" and "complain." They both denote representatives with the added feature that they have something to do with the interest of the speaker (condition 6 above). "Conclude" and "deduce" are

also representatives with the added feature that they mark certain relations between the representative illocutionary act and the rest of the discourse or the context of utterance (condition 7 above). This class will contain most of Austin's expositives and many of his verdictives as well for the, by now I hope obvious, reason that they all have the same illocutionary point and differ only in other features of illocutionary force. The simplest test of a representative is this: can you literally characterize it (*inter alia*) as true or false. Though, I hasten to add that this will give neither necessary nor sufficient conditions, as we shall see when we get to my fifth class.

These points about representatives will, I hope, be clearer when I discuss my second class which, with some reluctance, I will call

Directives. The illocutionary point of these consists in the fact that they are attempts (of varying degrees, and hence, more precisely, they are determinates of the determinable which includes attempting) by the speaker to get the hearer to do something. They may be very modest "attempts," as when I invite you to do it or suggest that you do it, or they may be very fierce attempts as when I insist that you do it. Using the shriek mark for the illocutionary point indicating device for the members of this class generally, we have the following symbolism:

$$! \uparrow W \text{ (H does A)}$$

The direction of fit is world-to-words, and the sincerity condition is Want (or Wish or Desire). The propositional content is always that the hearer H does some future action A. Verbs denoting members of this class are "order," "command," "request," "beg," "plead," "pray," "entreat," and also "invite," "permit," and "advise." I think also that it is clear that "dare," "defy," and "challenge," which Austin lists as behabitives, are in this class. Many of Austin's exercitives are also in this class.

Commissives. Austin's definition of commissives seems to me unexceptionable, and I will simply appropriate it as it stands with the cavil that several of the verbs he lists as commissive verbs do not belong in this class at all, such as "shall," "intend," "favor," and others. Commissives then are those illocutionary acts whose point is to commit the speaker (again in varying degrees) to some future course of action. Using "C" for the members of this class, generally we have the following symbolism:

$$C \uparrow I \text{ (S does A)}$$

The direction of fit is world-to-words, and the sincerity condition is Intention. The propositional content is always that the speaker S does some future action A. Since the direction of fit is the same for commissives and directives, it would give us a more elegant taxonomy if we could show that they are really members of the same category. I am unable to do this because, whereas the point of a promise is to commit the speaker to doing something (and not necessarily to try to get himself to do it), the point of a request is to try to get the hearer to so something (and not necessarily to commit or obligate him to do it). In order to assimilate the two categories, one would have to show that promises are really a species of requests to oneself (this has been suggested to me by Julian Boyd) or alternatively one would have to show that requests placed the hearer under an obligation (this has been suggested to me by William Alston and John Kearns). I have been unable to make either of these analyses work and am left with the inelegant solution of two separate categories with the same direction of fit.

A fourth category I shall call,

Expressives. The illocutionary point of this class is to express the psychological state specified in the sincerity condition about a state of affairs specified in the propositional content. The paradigms of Expressive verbs are "thank," "congratulate," "apologize," "condole," "deplore," and "welcome." Notice that in expressives there is no direction of fit. In performing an expressive, the speaker is neither trying to get the world to match the words nor the words to match the world, rather the truth of the expressed proposition is presupposed. Thus, for example, when I apologize for having stepped on your toe, it is not my purpose either to claim that your toe was stepped on nor to get it stepped on. This fact is neatly reflected in the syntax (of English) by the fact that the paradigm expressive verbs in their performative occurrence will not take *that* clauses but require a gerundive nominalization transformation (or some other nominal). One cannot say:

*I apologize that I stepped on your toe;

rather the correct English is,

I apologize for stepping on your toe.

Similarly, one cannot have:

*I congratulate you that you won the race.

nor

*I thank you that you paid me the money.

One must have:

I congratulate you on winning the race (congratulations on winning the race).
I thank you for paying me the money (thanks for paying me the money).

These syntactical facts, I suggest, are consequences of the fact that there is no direction of fit in expressives. The truth of the proposition expressed in an expressive is presupposed. The symbolization therefore of this class must proceed as follows:

$$E\ \emptyset\ (P)\quad (S/H\ \ldots\ property)$$

Where "E" indicates the illocutionary point common to all expressives, "Ø" is the null symbol indicating no direction of fit, (P) is a variable ranging over the different possible psychological states expressed in the performance of the illocutionary acts in this class, and the propositional content ascribes some property (not necessarily an action) to either S or H. I can congratulate you not only on your winning the race, but also on your good looks. The property specified in the propositional content of an expressive must, however, be related to S or H. I cannot without some very special assumptions congratulate you on Newton's first law of motion.

It would be economical if we could include all illocutionary acts in these four classes and would lend some further support to the general pattern of analysis adopted in *Speech Acts*, but it seems to me it is still not complete. There is still left an important class of cases, where the state of affairs represented in the proposition expressed is realized or brought into existence by the illocutionary force indicating device, cases

where one brings a state of affairs into existence by declaring it to exist, cases where, so to speak, "saying makes it so." Examples of these cases are "I resign," "You're fired," "I excommunicate you," "I christen this ship, the battleship Missouri," "I appoint you chairman," and "War is hereby declared." These cases were presented as paradigms in the very earliest discussions of performatives, but it seems to me they are still not adequately described in the literature and their relation to other kinds of illocutionary acts is usually misunderstood. Let us call this class,

Declarations. It is the defining characteristic of this class that the successful performance of one of its members brings about the correspondence between the propositional content and reality; successful performance guarantees that the propositional content corresponds to the world: if I successfully perform the act of appointing you chairman, then you are chairman; if I successfully perform the act of nominating you as candidate, then you are a candidate; if I successfully perform the act of declaring a state of war, then war is on; if I successfully perform the act of marrying you, then you are married.

The surface syntactical structure of many sentences used to perform declarations conceals this point from us because in them there is no surface syntactical distinction between propositional content and illocutionary force. Thus, "You're fired" and "I resign" do not seem to permit a distinction between illocutionary force and propositional content, but I think in fact that in their use to perform declarations their semantic structure is:

I declare: your employment is (hereby) terminated.
I declare: my position is (hereby) terminated.

Declarations bring about some alternation in the status or condition of the referred to object or objects solely by virtue of the fact that the declaration has been successfully performed. This feature of declarations distinguishes them from the other categories. In the history of the discussion of these topics since Austin's first introduction of his distinction between performatives and constatives, this feature of declarations has not been properly understood. The original distinction between constatives and performatives was supposed to be a distinction between utterances which are sayings (constatives, statements, assertions, etc.) and utterances which are doings (promises, bets, warnings, etc.). What I am calling declarations were included in the class of performatives. The main theme of Austin's mature work, *How to Do Things with Words*, is that this distinction collapses. Just as saying certain things constitute getting married (a "performative") and saying certain things constitute making a promise (another "performative"), so saying certain things constitute making a statement (supposedly a "constative"). As Austin saw but as many philosophers still fail to see, the parallel is exact. Making a statement is as much performing an illocutionary act as making a promise, a bet, a warning, or what have you. Any utterance will consist in performing one or more illocutionary acts.

The illocutionary force indicating device in the sentence operates on the propositional content to indicate among other things the direction of fit between the propositional content and reality. In the case of representatives, the direction of fit is words-to-world; in the case of directives and commissives, it is world-to-words; in the case of expressives there is no direction of fit carried by the illocutionary force because the existence of fit is presupposed. The utterance can't get off the ground unless there already is a fit. But now with the declarations we discover a very peculiar relation. The performance of a declaration brings about a fit by its very successful performance. How is such a thing possible?

Notice that all of the examples we have considered so far involve an extra-linguistic institution, a system of constitutive rules in addition to the constitutive rules of language, in order that the declaration may be successfully performed. The mastery of those rules which constitute linguistic competence by the speaker and hearer is not in general sufficient for the performance of a declaration. In addition, there must exist an extra-linguistic institution, and the speaker and hearer must occupy special places within this institution. It is only given such institutions as the church, the law, private property, the state, and a special position of the speaker and hearer within these institutions that one can excommunicate, appoint, give and bequeath one's possessions, or declare war. The only exceptions to the principle that every declaration requires an extra-linguistic institution are those declarations that concern language itself, as for example, when one says, "I define, abbreviate, name, call, or dub." Austin sometimes talks as if all performatives (and in the general theory, all illocutionary acts) required an extra-linguistic institution, but this is plainly not the case. Declarations are a very special category of speech acts. We shall symbolize their structure as follows:

$$D \updownarrow \emptyset(p)$$

Where D indicates the declarational illocutionary point, the direction of fit is both words-to-world and world-to-words because of the peculiar character of declarations, there is no sincerity condition, hence we have the null symbol in the sincerity condition slot, and we use the usual propositional variable "p."

The reason there has to be a relation of fit arrow here at all is that declarations do attempt to get language to match the world. But they do not attempt to do it either by describing an existing state of affairs (as do representatives) or by trying to get someone to bring about a future state of affairs (as do directives and commissives).

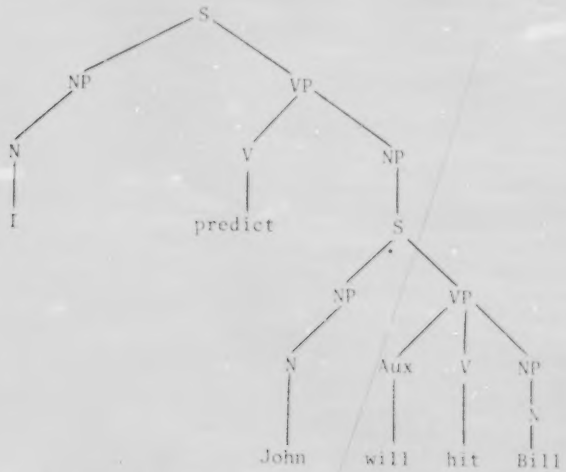
Some members of the class of declarations overlap with members of the class of representatives. This is because in certain institutional situations we not only ascertain the facts but we need an authority to lay down a decision as to what the facts are after the fact-finding procedure has been gone through. The argument must eventually come to an end and issue in a decision, and it is for this reason that we have judges and umpires. Both, the judge and the umpire, make factual claims; "You are out," "You are guilty." Such claims are clearly assessable in the dimension of word-world fit. Was he really tagged off base? Did he really commit the crime? They are assessable in the word-to-world dimension. But, at the same time, both have the force of declarations. If the umpire calls you out (and is upheld on appeal), then for baseball purposes you are out regardless of the facts in the case, and if the judge declares you guilty (on appeal), then for legal purposes you are guilty. There is nothing mysterious about these cases. Institutions characteristically require illocutionary acts to be issued by authorities of various kinds which have the force of declarations. Some institutions require representative claims to be issued with the force of declarations in order that the argument over the truth of the claim can come to an end somewhere and the next institutional steps which wait on the settling of the factual issue can proceed: the prisoner is released or sent to jail, the side is retired, a touchdown is scored. The existence of this class we may dub "Representative declarations." Unlike the other declarations, they share with representatives a sincerity condition. The judge, jury, and umpire can, logically speaking, lie, but the man who declares war or nominates you cannot lie in the performance of his illocutionary act. The symbolism for the class of representative declarations, then, is this:

$$D_r \uparrow \updownarrow B(p)$$

Where "D_r" indicates the illocutionary point of issuing representatives with the force of a declaration, the first arrow indicates the representative direction of fit, the second indicates the declarational direction of fit, the sincerity condition is belief, and the "p" represents the propositional content.

V. Some Syntactical Aspects of the Classification.

So far, I have been classifying illocutionary acts, and have used facts about verbs for evidence and illustration. In this section, I want to discuss explicitly some points about English syntax. If the distinctions marked in section IV are of any real significance, they are likely to have various syntactical consequences, and I now propose to examine the deep structure of explicit performative sentences in each of the five categories; that is, I want to examine the syntactical structure of sentences containing the performative occurrence of appropriate illocutionary verbs appropriate to each of the five categories. Since all of the sentences we will be considering will contain a performative verb in the main clause, and a subordinate clause, I will abbreviate the usual tree structures in the following fashion: The sentence, for example, "I predict John will hit Bill," has the deep structure:



I will simply abbreviate this as: I predict + John will hit Bill. Parentheses will be used to mark optional elements or elements that are obligatory only for restricted class of the verbs in question. Where there is a choice of one of two elements, I will put a stroke between the elements, e.g., I/you.

Representative. The deep structure of such paradigm representative sentences as "I state that it is raining" and "I predict he will come" is simply

I verb (that) + S.

This class, as a class, provides no further constraints, though particular

verbs may provide further constraints on the lower node S. For example, "predict" requires that an AUX in the lower S must be future or, at any rate, cannot be past. Such representative verbs as "describe," "call," "classify," and "identify" take a different syntactical structure, similar to many verbs of declaration, and I shall discuss them later.

Directives. Such sentences as "I order you to leave" and "I command you to stand at attention" have the following deep structure:

I verb you + you Fut Vol Verb (NP) (Adv)

"I order you to leave" is thus the surface structure realization of "I order you + you will leave" with equi NP deletion of the repeated "you." Notice that an additional syntactical argument for my including "dare," "defy," and "challenge," in my list of directive verbs and objecting to Austin's including them with "apologize," "thank," "congratulate," etc. is that they have the same syntactical form as do the paradigm directive verbs "order," "command," and "request." Similarly, "invite" and "advise" (in one of its senses) have the directive syntax. "Permit" also has the syntax of directives, though giving permission is not strictly speaking trying to get someone to do something, rather it consists in removing antecedently existing restrictions on his doing it.

Commissives. Such sentences as "I promise to pay you the money," and "I pledge allegiance to the flag," and "I vow to get revenge," have the deep structure.

I verb (you) + I Fut Vol Verb (NP) (Adv).

Thus, "I promise to pay you the money," is the surface structure realization of I promise (you) + I will pay you the money, with equi NP deletion of the repeated "I." We hear the difference in syntax between "I promise you to come on Wednesday" and "I order you to come on Wednesday" as being that "I" is the deep structure subject of "come" in the first and "you" is the deep structure subject of "come" in the second, as required by the verbs "promise" and "order" respectively. Notice that not all of the paradigm commissives have "you" as an indirect object of the performative verb. In the sentence "I pledge allegiance to the flag," the deep structure is not "I pledge to you flag + I will be allegiant." It is

I pledge + I will be allegiant to the flag.

Whereas there are purely syntactical arguments that such paradigm directive verbs as "order" and "command," as well as the imperative mood, require "you" as the deep structure subject of the lower node S, I do not know of any purely syntactical argument to show that commissives require "I" as the deep structure subject on their lower node S. Semantically, indeed, we must interpret such sentences as "I promise that Henry will be here on Wednesday" as meaning

> I promise that *I will see to it* that Harry will be here next Wednesday,

insofar as we interpret the utterance as a genuine promise, but I know of no purely syntactical arguments to show that the deep structure of the former sentence contains the italicized elements in the latter.

Expressives. As I mentioned earlier, expressives characteristically require a gerundive transformation of the verb in the lower node S. We say:

I apologize for stepping on your toe.

I congratulate you on winning the race.
I thank you for giving me the money.

The deep structure of such sentences is

I verb you + I/you VP + Gerundive Nom.

And, to repeat, the explanation of the obligatory gerundive is that there is no direction of fit. The forms that standardly admit of questions concerning direction of fit, that of clauses and infinitives, are impermissible. Hence, the impossibility of

*I congratulate you that you won the race.
*I apologize to step on your toe.

However, not all of the permissible nominalization transformations are gerundive; the point is only that they must not produce *that* clauses or infinitive phrases; thus, we can have either

I apologize for behaving badly,

or

I apologize for my bad behavior,

but not

*I apologize that I behaved badly,
*I apologize to behave badly.

Before considering Declarations, I want now to resume discussion of those representative verbs which have a different syntax form the paradigms above. I have said that the paradigm representatives have the syntactical form

I verb (that) + S.

But, if we consider such representative verbs as "diagnose," "call," and "describe," as well as "class," "classify," and "identify," we find that they do not fit this pattern at all. Consider "call," "describe," and "diagnose" in such sentences as

I call him a liar,
I diagnose his case as appendicitis, and
I describe John as a Fascist,

and in general the form of this is

I verb NP_1 + NP_1 be pred.

One cannot say

*I call that he is a liar,
*I diagnose that his case is appendicitis (perversely, some of my students find this form acceptable),
*I describe that John is a Fascist.

There, therefore, seems to be a very severe set of restrictions on an important class of representative verbs which is not shared by the other

paradigms. Would this justify us in concluding that these verbs were wrongly classed as representatives along with "state," "assert," "claim," and "predict" and that we need a separate class for them? It might be argued that the existence of these verbs substantiates Austin's claim that we require a separate class of verdictives distinct from expositives, but that would surely be a very curious conclusion to draw since Austin lists most of the verbs we mentioned above as expositives. He includes "describe," "class," "identify," and "call" as expositives and "diagnose" and "describe" as verdictives. A common syntax of many verdictives and expositives would hardly warrant the need for verdictives as a separate class. But leaving aside Austin's taxonomy, the question still arises, do we require a separate semantic category to account for these syntactical facts? I think not. I think there is a much simpler explanation of the distribution of these verbs. Often, in representative discourse, we focus our attention on some topic of discussion. The question is not just what is the propositional content we are asserting, but what do we say about the *object(s)* referred to in the propositional content: not just what do we state, claim, characterize, or assert, but how do we describe, call, diagnose, or identify *it*, some previously referred to topic of discussion. When, for example, there is a question of diagnosing or describing, it is always a question of diagnosing a person or his case, of describing a landscape or a party or a person, etc. These Representative illocutionary verbs give us a device for isolating topics from what is said about topics. But this very genuine syntactical difference does not mark a semantic difference big enough to justify the formation of a separate category. Notice in support of my argument here that the actual sentences in which the describing, diagnosing, etc. is done are seldom of the explicit performative type, but rather are usually in the standard indicative forms which are so characteristic of the representative class.

Utterances of

He is a liar,
He has appendicitis,
He is a Fascist,

are all characteristically *statements*, in the making of which we call, diagnose, and describe, as well as accuse, identify, and characterize. I conclude then that there are typically two syntactical forms for representative illocutionary verbs, one of which focuses on propositional content, the other on the object(s) referred to in the propositional content, but both of which are semantically representatives.

Declarations. I mention the syntactical form

$$I \text{ verb } NP_1 + NP_1 \text{ be pred}$$

both to forestall an argument for erecting a separate semantic category for them and because many verbs of declaration have this form. Indeed, there appear to be several different syntactical forms for explicit performatives of declaration. I believe the following three classes are the most important.

(1) I find you guilty as charged.
I now pronounce you man and wife.
I appoint you chairman.
(2) War is hereby declared.
I declare the meeting adjourned.
(3) You're fired.
I resign.
I excommunicate you.

The deep syntactical structure of these three, respectively, is as follows:

(1) I verb NP_1 + NP_1 be pred.

Thus, in our examples, we have

I find you + you be guilty as charged.
I pronounce you + you be man and wife.
I appoint you + you be chairman.

(2) I declare + S.

Thus, in our examples we have

I/we (hereby) declare + a state of war exists.
I declare + the meeting be adjourned.

This form is the purest form of the declaration: the speaker in authority brings about a state of affairs specified in the propositional content by saying, in effect, I declare the state of affairs to exist. Semantically, all declarations are of this character, though in class (1) the focusing on the topic produces an alteration in the syntax which is exactly the same syntax as we saw in such representative verbs as "describe," "characterize," "call," and "diagnose," and in class (3) the syntax conceals the semantic structure even more.

(3) The syntax of these is the most misleading. It is simply

I verb (NP)

as in our examples,

I fire you.
I resign.
I excommunicate you.

The semantic structure of these, however, seems to me the same as class (2). "You're fired," if uttered as performance of the act of firing someone and not as a report means

I declare + your job is terminated.

Similarly, "I hereby resign" means

I hereby declare + my job is terminated.

"I excommunicate you" means

I declare + your membership in the church is terminated.

The explanation for the bemusingly simple syntactical structure of these three sentences seems to me to be that we have some verbs which in their performative occurrence encapsulate both the declarative force and the propositional content.

VI. Conclusions.

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We are now in a position to draw certain general conclusions.

(1) Many of the verbs we call illocutionary verbs are not markers of illocutionary point but of some other feature of the illocutionary act.

Consider "insist" and "suggest." I can insist that we go to the movies, or I can suggest that we go to the movies; but I can also insist that the answer is found on p. 16, or I can suggest that it is found on p. 16. The first pair are directives; the second representatives. Does this show that insisting and suggesting are different illocutionary acts altogether from representatives and directives, or perhaps that they are both representatives and directives? I think the answer to both questions is no. Both "insist" and "suggest" are used to mark the degree of intensity with which the illocutionary point is presented. They do not mark a separate illocutionary point at all. Similarly, "announce," "present," and "confide" do not mark separate illocutionary points but rather the style or manner of performance of an illocutionary act. Paradoxical as it may sound, such verbs are illocutionary verbs, but not names of kinds of illocutionary acts. It is for this reason, among others, that we must carefully distinguish a taxonomy of illocutionary acts from one of illocutionary verbs.

(2) In section IV, I tried to classify illocutionary acts, and in section V, I tried to explore some of the syntactical features of the verbs denoting member of each of the categories. But, I have not attempted to classify illocutionary verbs. If one did so, I believe the following would emerge.

(a) First, as just noted, some verbs do not mark illocutionary point at all, but some other feature, e.g., insist, suggest, announce, confide, reply, answer, interject, remark, ejaculate, and interpose.

(b) Many verbs mark illocutionary point plus some other feature, e.g., "boast," "lament," "threaten," "criticize," "accuse," and "warn" all add the feature of goodness or badness to their primary illocutionary point.

(c) Some few verbs mark more than one illocutionary point, e.g., a *protest* involves both an expression of disapproval and a petition for change. *Promulgating a law* has both a declarational status (the propositional content becomes law) and a directive status (the law is directive in intent.) The verbs of representative declaration fall into this class.

(d) Some few verbs can take more than one illocutionary point. Consider "warn" and "advise." Notice that both of these take either the directive syntax or the representative syntax. Thus,

I warn you to stay away from my wife!	(directive)
I warn you that the bull is about to charge.	(representative)
I advise you to leave.	(directive)
Passengers are hereby advised that the train will be late.	(representative)

Correspondingly, it seems to me that warning and advising may be either telling you *that* something is the case (with relevance to what is or is not in your interest) or telling you *to* do something about it (because it is or is not in your interest). They can be, but need not be, both at once.

(3) The most important conclusion to be drawn from this discussion is this. There are not, as Wittgenstein (on one possible interpretation) and many others have claimed, an infinite or indefinite number of language games or uses of language. Rather, the illusion of limitless uses of language is engendered by an enormous unclarity about what constitutes the criteria for delimiting one language game or use of language from another. If we adopt illocutionary point as the basic notion on which to classify uses of language, then there are a rather limited number of basic things we do with language: we tell people how things are, we try to get them to do things, we commit ourselves to doing things, we express our feelings and attitudes, and we bring about changes through our utterances. Often, we do more than one of these at once in the same utterance.

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Where to Do Things with Words

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Austin (1962) uses the term MASQUERADE to point up a crucial distinction between such sentences as (1a) and (1b):

(1) a. *I move the piano.*
    b. *I move the question.*

While the speaker of (1a) makes an assertion, which can be said to be true or false, (1b) has a quite different status. Depending on quite complicated conditions (such as whether a meeting is in progress, whether the speaker has been recognized by the chair, and whether, in fact, a motion calling for a vote is at present on the floor), a particular utterance of (1b) will be said to be FELICITOUS (to use a term proposed by Austin) if all of the FELICITY CONDITIONS just mentioned (as well as some others), have been met, and INFELICITOUS if some of them have not been met.

Thus, despite the harmless SVO superficial form of (1b), which would lead us to expect it to be an assertion, an utterance of this sentence is a horse of another color. Depending on such felicity conditions as those cited earlier, it will either 'make it' as a motion or not: It is, to use another term invented by Austin, a PERFORMATIVE utterance. The study of the different kinds of felicity conditions on the use of verbs that can appear as the main verbs of performative utterances--verbs like *sentence, ask, vow, guarantee, request, excommunicate, absolve, promise, confess, bet,* and *bequeath*, to give a random and fractional list [fuller treatments are to be found in Fraser (1974) and McCawley (to appear)]-- and of the complex interactions between such felicity conditions, has occupied a number of researchers since Austin's pioneering work called attention to the existence of this interesting and important area in the philosophy of language.

I would like to borrow Austin's metaphor of the masquerade to discuss an area of recent research that is a descendant of the original work on performatives. Thus note that though the sentences in (3) have the same superficial form as the performative utterances in (2), they only masquerade as a promise and a question, respectively:

(2) a. *I promise you my continuing support, if you decide to run again.*
    b. *I ask you where you were on the night of the 14th.*
(3) a. *I promise you a good spanking if you pour any more sugar into my gas tank.*
    b. *I ask you how any decent citizen can give his vote again to Governor Schamlos.*

Typically, while (2a) would be used to make a promise--a commitment to perform an act in the future which the speaker believes is desired by his interlocutor--(3a) would be used to issue a warning to the interlocutor, that is, to describe a future event that the speaker believes is NOT desired by this interlocutor. And while (2b) could be used by a prosecutor trying to elicit information from a witness, (3b) can, for me, be used only as a rhetorical question (the *any* in the embedded subject forces this interpretation). That is, (3b) is only masquerading as a question: Really, it is closer in its ILLOCUTIONARY FORCE (another term of Austin's) to being a negative assertion like (4):

(4) *No decent citizen can give his vote again to Governor Schamlos.*

What interests researchers who try to 'see through' such masquerades is questions like the following: Why is it that sentences that look like promises on the surface, like (3a), can be used as warnings, while sentences that look like warnings, like (5), do not have the potential to be taken as promises?

(5) *I warn you that I will read your manuscript carefully.*

And why is it that sentences that look like requests for information, like (6a), can be used as rough paraphrases of declaratives like (4), while recommendations like (6b) cannot be?

(6) a. *I ask that you tell me how any decent citizen can give his vote again to Governor Schamlos.*
b. *I recommend that you tell me how any decent citizen can give his vote again to Governor Schamlos.*

Among the speech acts that a sentence can be used to perform are the illocutionary acts of the sentences. We will say that the BASIC illocutionary force of such sentences as (2a) is that of a promise, but that under a speaker assumption that giving support to the hearer will not be desired by the hearer, (2a) can also have a DERIVED force: the force of a warning. Thus, one task of the semantactician/philosopher of language is to specify that while promises can acquire, via a DERIVED FORCE RULE, the forces of warnings, warnings cannot acquire the forces of promises. Naturally, the researchers will not be content to merely state that this curious asymmetry exists, but will also attempt to explain it.[1]

In this chapter, I will be concerned, in part, with specifying the conditions under which one such derived force rule (or possibly a family of similar rules) can operate. This is the rule that specifies that such sentences as those in (7) can be taken to be requests on the part of the speaker for action on the part of the hearer:

(7) a. *I want you to hand over your valuables.*
b. *Could you hand over your valuables?*

The basic force of (7a) is that of a declarative, as can be seen by the fact that, as a direct quote, it can be followed by such appositives as those in (8):

(8) *Knucks McGonagle said, 'I want you to hand over your valuables,'* { *which was a lie* / *which was obviously true* / *which must have been false* }.

To the best of my knowledge, only true declaratives can antecede such appositives, as is shown by the ungrammaticalities of such close semantic pairs as those in (9)-(11):

(9) a. *Bill said, 'England is over there,' which was a lie.*
b. *??Bill said, 'There's England over there,' which was a lie.*
(10) a. *Mme. Post said, 'Nobody could help gagging on a quiche like that,' which was probably true.*
b. *??Mme. Post said, 'Who could help gagging on a quiche like that?,' which was probably true.*
(11) a. *?Tex said, 'She never saw him at all, I gather,' which was a lie.*
b. *??Tex said, 'I gather (?that) she never saw him at all,' which was a lie.*

Here, apparently, the deictics, rhetorical questions, and 'pulled punch assertions'[2] in the (b) examples are not close enough to quintessential declaratives to allow the type of appositives we see in (8).

And the basic illocutionary force of (7b) is that of a question, as we see from the fact that it can be followed by such appositives as those in (12). These are possible only after true information-seeking questions, as the oddnesses in (13) show:

(12) *Knucks said, 'Could you hand over your valuables?,'* { *which was not obvious* / *which no one knows to this day* / *which I had been wondering about myself* }.
(13) *Mme. Post said, 'Who could help gagging on a quiche like that?,'* { *?*which was not obvious* / *?*which no one knows to this day* / *??which I had been wondering about myself* }.

However, though the basic forces of (7a) and (7b) are those of a declarative and a request for information, respectively, they can also be used as a request to the hearer to hand over the valuables, as the sentences in (14) indicate.

(14) *Knucks said to Mme. Post,* { *'I want you to hand over your valuables?'* / *'Could you hand over your valuables?'* }, *and she complied.*

As Robin Lakoff has pointed out to me, the verb *comply* can be used anaphorically, as it is in (14), only when the clause to which it refers is taken to have the force of a request.[3] Some examples of the types of ungrammaticalities that result when this condition is not met can be seen in:

(15) **Knucks said to Mme. Post,* { *'Sure is nice out.'* / *'Might the Redlegs have won?'* / *'How scrawny these ruffians are!'* } *and she complied.*

It is possible to force the request-for-action interpretation of the sentences in (7) by inserting the morpheme[4] *please* preverbally, as in:

(16) a. *I want you to please hand over your valuables.*

b. *Could you please hand over your valuables?*

That these sentences can only be interpreted as requests can be seen by the impossibility of following them with the types of typically declarative appositive clauses used in (8), or with the types of information-seeking question appositive clauses shown in (12). Both of the sentences in (17) are ungrammatical:

(17) a. **Knucks said to Mme. Post, 'I want you to please hand over your valuables,' which was a lie.*
b. **Knucks said to Mme. Post, 'Could you please hand over your valuables?,' which was not obvious.*

This preverbal *please* is a litmus for requests, and much of the remainder of this chapter will concentrate on how the generalizations concerning its distribution are to be stated.[5]

In Gordon and Lakoff (1971), a general procedure is described for formally deriving some of the nonbasic illocutionary forces of a sentence by making reference to some of the felicity conditions on the forces in question. Thus, since requests have the felicity conditions shown in (18), among others:

(18) a. *The act requested is subsequent to the time of requesting.*
b. *The speaker wants the act requested to be performed.*
c. *The speaker believes that the hearer has the ability to carry out the act.*
d. *The speaker believes that the hearer is willing to carry out the act.*

such sentences as those in (19), which violate these conditions in various ways, are infelicitous to varying degrees:[6]

(19) a. **Yesterday, I asked him to return the day before.*
b. *?Please write me a check, though I don't want you to.*
c. *?*You can't, but please start the car.*
d. *?*Repaper the ceiling, though I know you don't want to.*

What Gordon and Lakoff suggest is the following general law for deriving nonbasic illocutionary forces:

(20) *A sentence that states a speaker-based felicity condition for a speech act of some kind will have that kind of speech act as a derived force, and a sentence that asks a yes-no question about a hearer-based felicity condition for some kind of speech act will have that kind of speech act as a derived illocutionary force.*

Thus, since (18b) and (18c) are speaker-based and hearer-based felicity conditions on requests, (7a) and (7b) can have, as (20) predicts, the derived forces of requests.

And if we say that preverbal *please* can appear only in sentences whose basic or derived illocutionary force is that of a request, we can explain the deviance of the sentences in (17): The *please* forces the request interpretation, which is incompatible with the appositive clauses.

The basic idea of (20) seems correct to me, but we should not conclude that the problem of derived illocutionary force resides in semantics alone,

as is implicit in such formulations as (20). Rather, the way a particular semantic entity finds expression is of crucial importance.

Thus, note that while (21a) and (21b) are exactly synonymous, on a reading, with the other sentences in (21) also being quite close to (21a) in meaning, only (21a) is fully natural with preverbal *please*, as the sentences of (22) indicate.

(21) a. *Can you lift your boots?*
b. *Are you able to lift your boots?*
c. *Would you be able to lift your boots?*
d. *Would it be possible for you to lift your boots?*
e. *Is it possible for you to lift your boots?*
f. *Do you have the* {*ability* / *capacity* / *power*} *to lift your boots?*

(22) a. *Can you please lift your boots?*
b. *?*Are you able to please lift your boots?*
c. *?Would you be able to please lift your boots?*
d. *?Would it be possible for you to please lift your boots?*
e. *??Would it be possible for you to please lift your boots?*
f. **Do you have the* {*ability* / *capacity* / *power*} *to please lift your boots?*

Similarly, while the sentences without *please* in (23) are all in the same semantic ballpark, we find that only some of them have viable derived request forces and can tolerate preverbal *please*:

(23) a. *I* {*want* / *would*} *like you to (please) sign here.*
b. *I would like it if you'd (?please) sign here.*
c. *I would appreciate it if you'd (??please) sign here.*
d. *I would be* {*glad* / *grateful*} *if you'd (?please) sign here.*
e. *I would be* {*happy* / *appreciative*} *if you'd (??please) sign here.*
f. *I'd be ecstatic if you'd (*please) sign here.*[7]

What this indicates is that transderivational rules like (20) cannot be conceived as relations between one logical structure and another one but rather must be thought of as relationships between one logical structure (the request interpretation) and part or all of another derivation.

Nonetheless, my major concern in this chapter will not be in documenting further the need for this relatively trivial departure from (20), which embodies that spirit of the Gordon-Lakoff proposal, but, rather, in arguing for a different kind of extension. To this end, consider the syntactic process of SLIFTING, which converts such sentences as those in (24) into such sentences as those in (25).[8]

(24) a. *I take it that you are a Plutonian.*
b. *Remember that I am slower than you.*
(25) a. *You are a Plutonian, I take it.*
b. *I am slower than you, remember.*

In particular, let us investigate the following problem: When can question clauses be slifted? The conversion of (26)-(27) shows some

instances in which SLIFTING can operate,[9] and the impossibility of converting (28) into *(29) shows some instances in which it cannot:

(26) a. *I want you to tell me when dinner will be ready.*
b. *Tell me where you are staying.*
c. *I wonder how long he has been floating near me.*
d. *Can you tell me who Sam is pitching to next?*

(27) a. *When will dinner be ready, I want you to tell me.*
b. *Where were you staying, tell me.*
c. *How long has he been floating near me, I wonder.*
d. *Who is Sam pitching to next, can you tell me.*

(28) a. *I (don't) want Fat Albert to tell me when dinner will be ready.*
b. *(Never) tell Ed where you were staying.*
c. *They may have wondered how long he has been floating near me.*
d. *Are you able to tell me who Sam is pitching to next?*

(29) a. **When will dinner be ready, I (don't) want Fat Albert to tell me.*
b. **Where were you staying, (never) tell Ed.*
c. **How long has he been floating near me, they may have wondered.*[10]
d. **Who is Sam pitching to next, are you able to tell me?*[11]

The first hypothesis that suggests itself is given in:

(30) GENERALIZATION I: *Embedded questions can be slifted only if the sentences in which they appear have the (basic or derived) illocutionary force of a request on the part of the speaker for the hearer to provide the relevant information about the wh-ed parts of the question that is to be slifted.*

This generalization, coupled with the independently necessary statement to the effect that questions based on *can* (and other modals) can convey requests for action, while questions based on *be able to* (and other periphrastic constructions) cannot [cf. the contrast between (22a) and the other sentences of (22)], would explain the contrast between (27d) and *(29d). Similarly, since *I want you to X* has the derived force of a request to X, whereas neither *I want Fat Albert to X* nor *I don't want Fat Albert to X* can have such a force, (27a) would be allowed by (30), but not *(29a). And since other meaning postulates must account for the rough equivalences shown in:

(31) a. *X wants Y to tell X Z* ≡ *X wants to* {*hear*/*know*} *Z from Y*[12]
b. *I want to know Z from you* ≡ *I wonder (about) Z*

Generalization I can also account for the contrast between (27c) and *(29c).

The full range of data which (30) can provide explanations for, in ways that I will not spell out in detail here, is suggested by the complex array of facts shown in:

(32)

a.
$$\left\{\begin{array}{l} \left\{\begin{array}{l}\text{I}\\\text{They}\end{array}\right\}\left\{\begin{array}{l}\text{want}\\\text{expect}\end{array}\right\}\left\{\begin{array}{l}\left\{\begin{array}{l}\text{you}\\\text{Jan}\end{array}\right\}\text{ to tell }\left\{\begin{array}{l}\text{me}\\\text{Bob}\end{array}\right\}\\ \text{(Sam) to }\left\{\begin{array}{l}\text{know from }\left\{\begin{array}{l}\text{you}\\\text{Jan}\end{array}\right\}\\\text{remember}\end{array}\right\}\end{array}\right\}\\ \left\{\begin{array}{l}\text{Could}\\\text{Can}\end{array}\right\}\left\{\begin{array}{l}\text{you}\\\text{Jan}\end{array}\right\}\text{ tell }\left\{\begin{array}{l}\text{me}\\\text{Bob}\end{array}\right\}\\ \text{Will }\left\{\begin{array}{l}\text{you}\\\text{Jan}\end{array}\right\}\left\{\begin{array}{l}\text{know}\\\text{tell }\left\{\begin{array}{l}\text{me}\\\text{Bob}\end{array}\right\}\end{array}\right\}\\ \left\{\begin{array}{l}\text{Would }\left\{\begin{array}{l}\text{you}\\\text{Jan}\end{array}\right\}\text{ be}\\\text{Are you}\\\text{Is Jan}\end{array}\right\}\text{willing to tell }\left\{\begin{array}{l}\text{me}\\\text{Bob}\end{array}\right\}\\ \text{Do you think }\left\{\begin{array}{l}\text{you}\\\text{they}\end{array}\right\}\left\{\begin{array}{l}\text{could}\\\text{can}\\\text{would be willing to}\end{array}\right\}\text{ tell }\left\{\begin{array}{l}\text{me}\\\text{Bob}\end{array}\right\}\end{array}\right\}\text{when dinner will be?}$$

(SLIFTING)

b. When will dinner be,
$$\left\{\begin{array}{l} \left\{\begin{array}{l}\text{I}\\\text{*they}\end{array}\right\}\left\{\begin{array}{l}\text{want}\\\text{*expect}\end{array}\right\}\left\{\begin{array}{l}\left\{\begin{array}{l}\text{you}\\\text{*Jan}\end{array}\right\}\text{ to tell }\left\{\begin{array}{l}\text{me}\\\text{*Bob}\end{array}\right\}.^{13}\\ \text{(*Sam) to }\left\{\begin{array}{l}\text{?know from }\left\{\begin{array}{l}\text{you}\\\text{*Jan}\end{array}\right\}\\\text{*remember}\end{array}\right\}.\end{array}\right\}\\ \left\{\begin{array}{l}\text{could}\\\text{can}\end{array}\right\}\left\{\begin{array}{l}\text{you}\\\text{*Jan}\end{array}\right\}\text{ tell }\left\{\begin{array}{l}\text{me}\\\text{*Bob}\end{array}\right\}\text{ ?}\\ \text{will }\left\{\begin{array}{l}\text{you}\\\text{*Jan}\end{array}\right\}\left\{\begin{array}{l}\text{*know}\\\text{tell }\left\{\begin{array}{l}\text{me}\\\text{*Bob}\end{array}\right\}\end{array}\right\}\text{?}\\ \left\{\begin{array}{l}\text{would }\left\{\begin{array}{l}\text{??you}\\\text{*Jan}\end{array}\right\}\text{ be}\\\text{*are you}\\\text{*is Jan}\end{array}\right\}\text{willing to tell }\left\{\begin{array}{l}\text{me}\\\text{*Bob}\end{array}\right\}\text{ ?}\\ \text{?do you think }\left\{\begin{array}{l}\text{you}\\\text{*they}\end{array}\right\}\left\{\begin{array}{l}\text{could}\\\text{can}\\\text{?*would be willing to}\end{array}\right\}\text{tell }\left\{\begin{array}{l}\text{me}\\\text{*Bob}\end{array}\right\}\text{ ?}\end{array}\right\}$$

In the bracketed expressions in (32), only those sequences of words that can convey requests for information are in bold type. The important parts of these underlined sequences are repeated in (33) and (34):

(33) a. *I want you to (please) X.*
b. $\left\{\begin{array}{l}\text{Could}\\\text{Can}\end{array}\right\}$ *you (please) X?*
c. *Will you (please) X?*

(34) a. *I want to (?please) know X from you.*
b. *Would you be willing to (??please) X?*
c. *Do you think you could (?please) X?*

As I have already pointed out in connection with (21)-(23), sentences starting with such sequences as those in (33a) and (33b) can convey requests. The Gordon-Lakoff rule stated in (20) accounts for this, and Gordon and Lakoff also explain, along similar lines, how sentences starting with *will you* can convey requests. Thus, all of these sentences can exhibit a preverbal *please*.

The introductory subsequences in (34) are not as good in conveying requests, as the prefixes before the inserted *please*s in these examples indicate. While we need not inquire in detail as to what the conditions are under which it is less than completely possible to achieve the derived force of a request, the mere fact that 'quasi-requests' like those in (34) exist is of considerable interest, for it suggests that no discrete treatment of the problem of derived illocutionary force is likely to be viable. To account for such quasi-requests as these,[14] it will eventually be necessary to construct formal rules that will assign DEGREES of requesthood, declarativeness, horatoriness, and so on.[15]

At any rate, the fact that the sliftability of the embedded question of (32a) varies directly with the extent to which the sentence in which it occurs can convey a request for information provides some support for the correctness of Generalization I.

Nonetheless, it is necessary to reformulate this generalization, for we also find that questions can be slifted out of declarative sentences that REPORT requests. It is also clear that the conversion of (35a) into (35b) closely parallels that of (32a) into (32b):[16]

(35)
a. Archie told Edith that {she / they} {wanted / expected} {her / Jan} to tell {him / Bob} (Sam) to {know from / remember} {her / Bob}
Archie asked Edith whether {she / Jan} {could tell / would {know / tell} / would be / was willing to tell / thought {she / they} {could / would be willing to}} {him / Bob} when dinner would be.
(SLIFTING)
b. When would dinner be,
Archie told Edith, that {she / *they} {wanted / *expected} {her / *Jan} to tell {*him / *Bob} *Sam to {know from / *remember} {*her / *Bob}
Archie asked Edith whether {she / *Jan} {could tell / would {know / tell} / would be / *was willing to tell / *thought {she / they} {could / would be willing to}} {him / *Bob}

Similarly, the conversion of (37a) into (37b) is possible only under conditions closely parallel to those under which (36a) can be converted into (36b):

(36) a. *I ask you (to tell me) when dinner will be.*

(SLIFTING)

b. *When will dinner be, I asked you (?to tell me)?*

(37) a. *Archie$_i$ asked Edith$_j$ (to tell him$_i$) when dinner would be.*

(SLIFTING)

b. *When would dinner be, Archie$_i$ asked Edith$_j$ (??to tell him$_i$).*

I have described these parallels only as 'close,' not as 'exact,' because it is obvious that there is an asymmetry here:

(38) *Whenever it is possible to slift a question out of a reported request, it is possible to slift it in a corresponding sentence that is a request, or has the force of one, but not conversely.*

In other words, whenever a construction in (35b) or (37b) is possible, the corresponding construction is possible in (32b) or (36b), but not conversely. This is one reflection of a quite general phenomenon, which I have stated here in a rough form:

(39) THE PENTHOUSE PRINCIPLE: *Any rule that can operate in embedded contexts can also operate in unembedded ones, but not conversely.*[17]

Therefore, since it appears that the asymmetry noted in (38) can be made to follow from the Penthouse Principle, I will not attempt here a detailed account of the difference between (32) and (36), on the one hand, and (35) and (37), on the other, and will instead assume in what follows that a single characterization should be given for both types of sentences.[18]

The rule stated in (40) can serve as a first approximation to such a characterization:

(40) GENERALIZATION II: *Embedded questions can be slifted only if the agent of the next-highest verb of saying is being requested by the indirect object of this verb to provide the relevant information about the wh-ed parts of the question that is to be slifted.*

While there are several inadequacies in (40),[19] I doubt that the three conclusions that I will draw from it would be affected in any major way by any reformulations that would be necessary to arrive at a more adequate rule.

CONCLUSION I

Though I have not stated in detail the formal rules that assign requesthood, it seems clear to me that it will only be possible to cast these rules in a maximally general way if the performative analysis of declara-

tives is assumed. That is, we want the conversion of (41a) to (41b) to be possible under precisely the same conditions as the conversion of (26a) to (27a) is possible. But this identity of conditions is apparent only if the latter two sentences are reanalyzed, in accordance with the performative analysis, as deriving from remote structures that include a highest performative, as in (42a) and (42b):

(41) a. *Archie$_i$ told Edith$_j$ that he$_i$ wanted her$_j$ to tell him$_i$ when dinner would be.*

⇓ (SLIFTING)

b. *When would dinner be, Archie$_i$ told Edith$_j$ that he$_i$ wanted her$_j$ to tell him$_i$.*

(42) a. *I tell you that I want you to tell me when dinner will be.*

⇓ (SLIFTING)

b. *When will dinner be, I tell you that I want you to tell me.*

There exist many other parallels between apparently unembedded cases like (32) and obviously embedded cases like (35). All of these provide further support for the performative analysis.

CONCLUSION 2

The basic idea of Gordon and Lakoff was to account for derived illocutionary forces by transderivational rules that would relate one logical structure [one expressing a declarative, like (42a), say] to a different logical structure [one expressing a request, like (43)]:

(43) *I ask you to tell me when dinner will be.*

But the preceding discussion has shown, in effect, that the type of rules that Gordon and Lakoff postulate must be able to apply also in embedded contexts, WITHOUT CHANGING THE FORCE OF THE STRUCTURE IN WHICH THEY APPLY.

An example may make this point clearer. The basic illocutionary force of (41a) is that of a declarative. Since the derived force rules will specify that it is an assertion to the effect that Archie has requested Edith to answer the embedded question, Generalization II will allow this question to be slifted. The result, (41b), SEEMS TO RETAIN ITS DECLARATIVE FORCE.[20]

CONCLUSION 3

Assuming, for the sake of discussion, the correctness of Conclusion 2 (though bearing in mind the caveat of footnote 20), we see that derived force rules must be integrated into the grammar much more tightly than has sometimes been held to be necessary. In particular, they must be able to apply in embedded contexts, IN SUCH A WAY THAT A SYNTACTIC TRANSFORMATION--the rule of SLIFTING--CAN APPLY TO THEIR OUTPUT. In other words, if derived force rules are taken to be rules of pragmatics, and I believe this conception to be quite a traditional one, then it is not possible to

relegate syntactic and pragmatic processes to different components of a grammer. Rather than it being possible for the 'work' of linking surface structures to the sets of contexts in which these structures can be appropriately used to be dichotomized into a set of pragmatic rules and a set of semantactic rules, it seems to be necessary to postulate that this work is to be accomplished by one unified component, in which rules concerned with such pragmatic matters as illocutionary force, speaker location, and so on, and rules concerned with such semantic matters as synonymy, metaphoric extension of senses, and so on, and rules concerned with such syntactic matters as the distribution of meaningless morphemes,[21] the choice of prepositional versus postpositional languages, and so on, are interspersed in various ways.[22] Following a recent practice of Fillmore, we might term the study of such mixed components PRAGMANTAX.

Note that accepting the conclusion that there is a pragmantactic component does not necessarily entail abandoning the distinction between pragmatic, semantic, and syntactic aspects of linguistic structure. Conceptually, at least, it does seem possible to draw these traditional distinctions, and it may even sometime be possible to show that pragmatic violations (like including a first-person pronoun in a newspaper article that has no byline), semantic violations (like asserting that something fell upward), and syntactic violations (like keeping the first occurrence of *and*, rather than the last, in a coordinate structure [**winter, and spring, summer, fall* instead of *winter, spring, summer, and fall*]) all produce psychologically different reactions. At present, however, there are no known psychological correlates of this tripartite distinction. If future research should uncover empirical support for these conceptual distinctions, it would still be perfectly possible to maintain the hypothesis that there is a pragmantactic component, in which rules of psychologically distinct types were intermixed. For to claim that there is a pragmantactic component is merely to claim that rules of the three types interact in a way that would preclude their being studied in isolation from each other.

How could this conclusion--that pragmatic rules like Generalization II must apply before syntactic transformations like SLIFTING--be avoided? It is worthwhile examining in some detail a hypothetical reanalysis of the type of facts I have been dealing with, for there might be some who would see in such a reanalysis a serious alternative to accepting the postulation of a pragmantactic component.

Supposing, for instance, that one were to say that there is no 'syntactic' difference between (44a) and (44b)--that the syntactic component, operating in total isolation from any pragmatic inputs such as those in Generalization II, specifies both of the strings in (44) as being 'syntactically well-formed':

(44) a. *When did Tom leave, I want to know.*
b. *When did Tom leave, I don't want to know.*

After the syntactic component had applied, an independently operating pragmatic component, which would contain the equivalent of Generalization II, would specify that certain syntactically well-formed strings, like (44b), were 'pragmatically deviant.'

Under such a conception, which would shrink the traditional domain of syntax by removing from the syntactic component the work of specifying the distribution of so-called 'empty *do*' in English, as well as the work of specifying the conditions under which tensed auxiliaries precede the subjects of their clauses, my claim--that it is necessary to intersperse pragmatic and syntactic rules--would have been avoided. But at what cost?

The cost, it seems to me, would be that of abandoning a rather tradi-

tional definition of the term SYNTAX--namely, that syntax is the field that specifies the set of possible construction types of a language, and the distribution of the grammatical, nonlexical, morphemes of the language in these constructions. Grammatical morphemes have usually been taken to be the morphemes that indicate case, mood, and tense; often the complementizers and other subordinators of a language; and various morphemes involved in particular constructions (like the *-er* of comparison, the expletives *there* and *it*, etc.). Some scholars would also include under syntax the laws governing the distribution of certain lexical items (like *remind*), but this is a disputed area.

To say that (44b) is syntactically well-formed is to imply that the laws governing the distribution of empty *do* and the laws specifying the conditions under which auxiliaries precede subjects are not syntactic, a conclusion that would be at variance not only with the previous literature in generative grammar but with traditional usage as well.

But what's in a name, we may ask. After all, the term SYNTAX is a theoretical term, one having sense only within the theory in which it is embedded. Just as we are free to devise new theories of linguistic organization, so we must be free to change the meanings of the theoretical terms that figure in each of these new theories.

To a certain extent, this is true. The meanings of such terms as PHONEME, MORPHEME, DIALECT, and so on, vary widely if surveyed across various structuralist and transformational theories of language. On the other hand, after particularly radical theoretical changes, older theoretical terms simply have no counterparts in later theories. For instance, it would be hard to find anything that corresponds to PHLOGISTON or HUMOR in modern-day thermodynamics or medicine.

In one sense, then, we are free to reapply such traditional linguistic terms as SYNTACTIC and SEMANTIC to rules that differ, in that they have odd and even numbers of terms in their structural descriptions, respectively, or to rules whose names begin with vowels and consonants, respectively, or to rules whose discoverers were born in leap and non-leap years, respectively, or to any other conceivable difference between rules.

However, if someone were to propose to apply the syntax-semantics distinction in any of the cases of the last paragraph, it would surely be objected that he had adopted a confusing terminology. One would want to know why traditional terms had been retained instead of new terms being fashioned.

With regard to such contrasts as those in (44), it seems to me that the situation is essentially the same. That is, to claim that (44b) is syntactically well-formed would be to use SYNTACTIC in such a novel way as to extend its meaning beyond recognition, and one would have to inquire as to the utility of such an extension. That is, what would be gained by partitioning the set of all strings into two sets--'syntactically well-formed' strings (let us refer to this set more neutrally as Set A) and its complement, Set B? How would Sets A and B be connected to empirically observable facts?

Unless such facts can be brought to light, Conclusion 3--that linguistic systems relating contexts and surface structures do not admit of the traditional partitioning into pragmatic, semantic, and syntactic components, but are describable only by mixed components of the type that I have been referring to as 'pragmantactic'--must stand. It is a far from novel observation--much recent work of Fillmore (1971), G. Lakoff (1969, 1972b, 1974), and R. Lakoff (1972a, b; 1973a, b, c,) has had the exploration of such mixed systems as its goal--but since it is that consequence of the sets of facts that I have examined in this paper that is most at variance with previously held conceptions of the relationship between language use and

linguistic structure, it is the consequence that should be subject to the closest theoretical scrutiny in future research.

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FOOTNOTES

[1] In the case at hand, the explanation will probably be found to lie in the more general asymmetry which specifies that the positive member of a pair of polar opposites is the unmarked member, as has often been noted. Thus, contrast the grammaticality of the question-answer sequence in (i) with the ungrammaticality of the mixed sequence in (ii):

(i) Q: *How wide is it?*
A: *Quite* {*wide* / *narrow*}.

(ii) Q: *How narrow is it?*
A: *Quite* {**wide* / *narrow*}.

Note also such contrasts as (iii)-(*iv), which were first pointed out by Paul Chapin (cf. Chapin, 1965):

(iii) *To say that a tree is* {*thick* / *thin*} *is to say something about its thickness.*

(iv) *To say that a tree is* {**thick* / *thin*} *is to say something about its thinness.*

[2] "Hedged" assertions would probably be a better term. For an important beginning on the incredibly difficult semantic problems posed by hedges of various sorts, cf. G. Lakoff (1972a).

[3] This is only a necessary, not a sufficient, condition, as the following sentence indicates:

(i) *'The Duke said to Bottomley, 'It's cold in here,' and Bottomley complied.*

The point is that though statements can also have the derived forces of requests, such requests cannot be referred to anaphorically with *comply*.

[4] Or morphemes? Cf. the noun *plea*.

[5] It is important to distinguish the behaviors of preverbal *please*, sentence-final *please*, and sentence-initial *please*. Thus, note the contrast between (i) and (ii), which points up the first distinction:

(i) ??*Are you able to please call back later?*
(ii) *Are you able to call back later, please?*

and that between (iii) and (iv), which points up the second one:

(iii) **It's cold in here, please.*
(iv) *Please--it's cold in here.*

As far as I know, the following general law holds:

(v) *Preverbal please* ⊃ *sentence-final please* ⊃ *sentence-initial please*

That is, the set of all sentences that can add a preverbal *please* is a subset of the set of all sentences that can add a final *please*, and this last is a subset of all sentences that can add an initial *please*. Incidentally, such sentences as *(vi), which were pointed out to me by George Lakoff, show that it is not possible to maintain that just any sentence can add an initial *please*:

(vi) **Please--away ran the troopers.*

Naturally, it is not sufficient to merely state such implicational laws as (v)--one must seek explanations not only for the existence of positionally conditional differences but also for the direction of the implication.

Unfortunately, however, I have nothing to suggest at present. I have pointed out these distinctions merely to call the reader's attention to the fact that the generalizations that I formulate in the text are not intended to describe the syntax of all three types of *please*, but merely to serve as first steps in describing the distribution of the most restricted *please*--the preverbal one.

[6] In order to limit the scope of this chapter, I will not take up the important problem of drawing distinctions between the different types of felicity conditions, and the different types of violations that result from violating these different types of restrictions. Cf. Searle (1969) for some discussion.

[7] While I cannot digress into the fascinating problems that would arise in seeking a detailed explanation of such contrasts as those in (21)-(23), I might point out in passing that the difference between (22a) and (22b) is not accidental. Sentences containing modals typically have more derived forces than synonymous sentences without modals, as Bruce Fraser has pointed out to me. Thus, note the contrasts in:

(i) *Will you (please) leave?*
(ii) *Are you going to (?*please) leave?*
(iii) *May I (please) have those spurs?*
(iv) *Am I permitted to (*please) have those spurs?*

Since parallel contrasts appear to exist in other languages, such as German and French [cf. (v) and (vi)]:

(v) a. *Können Sie (bitte) Ihren Hut abnehmen?*
can you please your hat take off
'Can you (please) take off your hat?'
b. *Sind Sie imstande (*bitte) Ihren Hut abzunehmen?*
are you able please your hat to take off
(vi) a. *Pouvez-vous enlever vôtre chapeau, s'il vous plait?*
Can you take off your hat please
b. *??Êtes-vous capable d'enlever vôtre chapeau, s'il vous plait?*
are you able of to take off your hat please

the conclusion that naturally suggests itself is that one of the relevant parts of a language-universal definition of the concept MODAL VERB is precisely this 'force shiftiness.'

[8] Cf. Ross (1973c) for arguments that parentheticals such as those in (25) derive from such sources as (24).

[9] One argument that SLIFTING, or some rule functionally equivalent to it, is involved in the production of such sentences as (27)--that is, that (27) cannot be a remote structure--will be developed in footnote 16 in connection with examples like (35b).

[10] Since *wonder* is a verb that can take direct quotes, (29c) might be interpretable as a slifting form of something like:

(i) *(Each$_i$ of) them may have wondered 'How long has he been floating near me$_i$?'*

where the first-person pronoun *me* refers, as is mandatory in direct quotes, to the subject of the quote-taking verb, not to the utterer of the sentence. If *me* in (29c) is taken to refer to a suppressed *each*, as in (i), then (29c) might be grammatical for some speakers. But if the question is forced to be an indirect quote, by taking this *me* to refer to the utterer, then (29c) is impossible, and this is the reading on which I have starred it.

[11] This string of words is grammatical if read as a sequence of two sentences, each of which is a question, but it is out if read with the kind of single-sentence intonation that (27d) can be given. The contrast emerges even more clearly if the parentheticals in (27d) and in (29d) are inserted, by a rule I refer to as NICHING [cf. Ross (in preparation) for details], into their respective main clauses, as (i) shows:

(i) *Who, {?can you / *are you able to} {tell me, is Sam pitching to next?*

[12] Of course, this rough equivalence should be reduced to the more basic one shown in (i):

(i) *Y tell Z to X = Y {hear / know} Z from Y*

[13] I am aware that many of the asterisks in (32b) (and in corresponding sentences later on) are too uncharitable, particularly with respect to the NP occurring where *you* occurs. Thus, the tag in:

(i) *. . . , I want Jan to tell me.*

is interpretable in a context in which the speaker is addressing a group containing Jan, or in a context in which the speaker is requesting the person(s) addressed to get Jan to answer his question. The same obtains for the tags in:

(ii) a. *. . . , could Jan tell me?*
b. *. . . , will Jan tell me?*

Also, when *Bob* replaces *me* in such tags, interpretations are usually possible under which the questioner is one of a group including Bob, and so on. But for the purposes of providing a simplified look at a complex situation, I have ruthlessly given asterisks to these 'further out' interpretations. In any case, they do not materially affect the main point, which is that a parallel exists between (32) and (35), for the asterisks in this latter example should also be taken to be under the

same caveat.

[14] Other examples of quasi-requests are the strings in (22) and (23) that are less than fully grammatical.

[15] I have argued for the postulation of SQUISHES--matrices representing the interactions of nondiscretely varying parameters--in a number of recent articles (cf. Ross, 1972, 1973b, 1973d). The semigrammaticalities of (22), (23), and (34) make it seem likely that the area of derived illocutionary force will present many similarities to the problems these articles take up.

[16] One argument that sentences like those in (35b) have been produced by SLIFTING stems from the fact that the rule accounting for sequence-of-tense facts has operated to produce the *would* in the question clause. If (35b) were not derived from (35a), but was, rather, basic, then in order to produce the *would* of the question clause of (35b), any sequence-of-tense process that would proceed from the past tense of *told* or *asked* to introduce the past-tense morpheme on *would* would not proceed down the tree but would, instead, go backward into a noncommand clause--the question clause of (35b). In Ross (1973c), I argue that a general constraint on rules should be imposed which would preclude any such case.

On the other hand, if (35a) underlies (35b), the sequence-of-tense rule will be able to proceed down the tree from *told* or *asked* to *would*, before SLIFTING, in conformity with the constraint just mentioned.

[17] The principle is explained and argued for in detail in Ross (1973a).

[18] The following is a brief sketch of what I would hope would turn out to be the structure of a more detailed account. In line with my comments on the differences between (33) and (34), I assume that the rules that assign derived illocutionary forces will give graded outputs, and will say, for instance, that a sentence like (34c) can only partially attain the force of a request. Let us say that these squishy derived force rules assign strings some index of requesthood, x, where $0 \leqslant x \leqslant 1$. For the sake of discussion, let us say that, in isolation, (34c) would be assigned the value [0.43 Request]. The effect of the Penthouse Principle on such derived force rules would be to lower, in embedded contexts, all values of x produced in isolation, possibly, but not necessarily, by some constant amount. Thus, though strings (34c) would receive the value of 0.43 in isolation, when they appear as the object of *Archie asked Edith*, as in (35b), the embedding decrement might bring x down to 0.13, say, which would be below the '*' threshold, as far as requests were concerned.

While this sketch is brief and programmatic in the extreme, I think the approach that I would attempt to implement should be sufficiently clear.

[19] One obvious defect is the fact that (40) will not account for the grammaticality of (27c) or the corresponding embedded case in:

(i) *When would dinner be, Archie wondered.*

Assuming the performative analysis for declaratives (cf. Ross, 1970 for details), the source of (i) would be (ii), approximately:

(ii) *I tell you that Archie wondered when dinner would be.*

Here, the first verb of saying above the question is *tell*, and it is not its subject that is requesting information. The only way to retain (40) in its present form would be to show that independent justification existed for decomposing *wondered* into something on the order of *said-want-tell*, as in:

(iii) *I tell you that Archie$_i$ said to X that he$_i$ wanted X to tell him$_i$ when dinner would be.*

While I know of no difficulty in principle with such a decomposition, at present it would be *ad hoc*.

It might appear that the version of (37b) that does not contain the verb of saying *tell* would also cause problems for (40), but in fact, as Postal has pointed out (cf. Postal, 1970), there exists independent evidence for a rule deleting *tell* under the conditions suggested in:

(iv) *X ask Y* [*(Y) tell X* ∅]$_S$

Equi ⇓ ⇓ *Tell* DELETION

∅

First of all, this rule regularizes the distribution of *ask*, for it allows one to simply specify that *ask* is an equi-subject predicate (cf. Perlmutter, 1971 for a definition of this term), instead of making it necessary to call it EITHER an equi-subject predicate OR a question-taking predicate. Second, it resolves an apparent irregularity in the control problem. In (v), the indirect object of *ask* deletes the subject of *buy*, while in (vi), the subject of *ask* does so:

(v) *I asked Josh to buy a leech.*
(vi) *I asked Josh when to buy a leech.*

Under the Tell DELETION analysis, however, the controller of the deleted subject of *buy* in (vi) is really the indirect object of the deleted *tell*, as is shown in:

(vii) *I asked Josh* [*he tell me* [*when I should buy a leech*]].

Thus, the short version of (37b) does not cause any problems for (40).

But there is a second problem with (40), which was pointed out to me by Jim McCawley. Namely, as (40) is formulated at present, it will allow all of the sentences in (viii) to undergo SLIFTING, yielding the corresponding sentences in (ix). However, not all of these are grammatical:

(viii) a. *I think that Archie asked Edith when dinner would be.*
b. *I doubt that Archie asked Edith when dinner would be.*
c. *Archie tried to ask Edith when dinner would be.*
d. *Archie failed to ask Edith when dinner would be.*
e. *Archie could not have failed to ask Edith when dinner would be.*

(ix) a. *?When would dinner be, I think that Archie asked Edith.*
b. **When would dinner be, I doubt that Archie asked Edith.*
c. *When would dinner be, Archie tried to ask Edith.*
d. **When would dinner be, Archie failed to ask Edith.*
e. *??When would dinner be, Archie could not have failed to ask Edith.*

The complexity of the conditions that seem to be involved here suggests that a great deal of research may be necessary to repair the deficiency of (40) that McCawley pointed out.

[20] Dick Oehrle has pointed out to me that there may be some change of force involved in changing (41a) to (41b). In particular, while the former could be followed by such appositives as *which was a lie* [cf. (i)],

which I argued, in connection with (8)-(11), to be restricted to declaratives:

(i) *You said, 'Archie told Edith that he wanted her to tell him when dinner would be,' which was a lie.*

the latter is somewhat odd when such tags are appended to it:

(ii) *??You said, 'When would dinner be, Archie told Edith that he wanted her to tell him,' which was a lie.*

A shorter example of the same type, (iii), seems better:

(iii) *?You said, 'When would dinner be, Archie asked Edith,' which was a lie.*

The '?' prefix on (iii) shows that the rule assigning declarativeness will not give it a 1.0 rating, but it certainly cannot be regarded as having the force of a question, either, as (*iv) shows:

(iv) *You said, '[[When would dinner be]$_{S1}$, Archie asked Edith]$_{S2}$,'*

{ *?which$_1$* / **which$_2$* } *was not obvious.*

It is weakly possible to follow (iv) with a question-requiring appositive, but only if the *which* refers to Archie's question, not to the whole direct quote.

Thus, while such sentences as (41b) seem not to be perfect as declaratives, they seem to come closer to having this force than to having any other. I conclude, then, that applying derived force rules in embedded contexts does not change the force of the superordinate structure. It is obvious, however, that this whole area will require intensive study in the future. In particular, what are the theoretical implications of another of Oehrle's observations--namely, that such sentences as (35b) and (41b) occur only in narration? These are deep waters, and I must leave the many questions that denizen them unanswered.

[21] If such there be.

[22] Surely, it will in the course of time be possible and necessary to isolate possible from impossible types of interspersions and admixtures of these various (and other various) types of rules, but at present, in my opinion, not enough mixed cases have been studied to allow any such constraints to be formulated with an adequate empirical basis.

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Aspects of Linguistic Pragmatics

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ILLOCUTIONARY FORCE

For the past six years or so, generative grammarians have been investigating the thesis that every sentence is dominated in underlying structure by a performative clause which in most cases is entirely abstract.[1] The brunt of the effort has been directed toward adducing confirmatory or disconfirmatory syntactic evidence. All things considered, the abstract performative hypothesis is about as well motivated at this point in time as any claim concerning very abstract syntactic structure. The purpose of this paper is to present some of the understanding of natural language and natural language pragmatics which can be gained by scrutinizing the performative theory.

Under the defining postulate of generative semantics (within which framework the performative analysis developed), the deep syntactic structure of a sentence is a representation of the meaning of the sentence. Now the abstract performative clause identifies the illocutionary force of sentences and, since it is part of deep syntactic (=semantic) representation, then, from the generative semantic point of view, illocutionary force is an aspect of sentence meaning. Under this view, then, illocutionary acts are not different in kind from locutionary acts, to use Austin's term (Austin 1965, 94ff.), or propositional acts, to use Searle's (Searle 1969, 29ff.). Rather, illocutionary acts are a type of locutionary or propositional act in that they are grounded in the communication of a propositional notion. This result agrees more or less with L. Jonathan Cohen's position (Cohen 1971).[2]

Cohen, however, was forced to use a disjunction in describing illocutionary force (Cohen 1971, 587):

> ...the illocutionary force of an utterance is that aspect of its meaning which is either conveyed by its explicity performative prefix, if it has one, or might have been so conveyed by the use of such an expression.

The corresponding definition under the linguistic theory of speech acts is a single statement: "The illocutionary force of an uttered sentence is that aspect of its meaning which is represented by the performative clause in the semantic structure of the sentence."

Cohen's identification of the illocutionary force of a non-performative utterance hearkens directly back to Austin's statement that illocutionary force is conventional, "...in the sense that at least...it...could be

made explicit by the performative formula" (Austin 1965, 103). But the study of speech acts from the formal linguistic point of view casts grave doubt on this potential-performative definition of illocutionary force.

First of all there are many sorts of illocutionary acts to which no explicit performative formulae correspond, in part because there are abstract performative structures which are not matched by any lexical performative verb.[3] For example, test and survey questions constitute a special type with a special force in English as exemplified by sentences such as (1) and (2).

(1) The first man to transmute lead into cottage cheese was _____?
(2) Your income for the past year was under $5,000? $5,000-$15,000? over $15,000?

Yet the closest available performative verb is ask, which not only fails to distinguish this kind of question from others but is dubiously performative anyway. Most people find sentence (3) odd, if not ungrammatical.

(3) *I ask you where the bus station is.

The second cause of the failure of the potential-performative definition is that some performative verbs dislike appearing in the canonical garb of explicit performative formulae. *Fire*, meaning "dismiss from one's employ," idiosyncratically must appear in the passive when used performatively although its non-performative use is not so constrained:

(4) You're fired.
(5) *I fire you.
(6) I was fired.
(7) They fired me.

One might, of course, call sentence (4) an explicit performative, but this would weaken an already palsied notion. From the linguistic point of view, performativeness is a semantic (read: deep syntactic) concept, and any attempt to define it directly in terms of surface syntax would necessarily involve incorporating a good deal of the grammar of the language into the definition. Some surface structures fairly directly reflect abstract performative structure, others do so less directly, and the rest (the majority, in fact) do so with great subtlety. Similarly, if one attempted to explain the semantic concept of quantifiers directly in terms of the surface distribution of morphemes, he would find the grammar of the language fighting him tooth and nail. Certain surface morphological patterns fairly clearly indicate their quantificational origin, while others do not, e.g. *beans* in the sentence *Bill doesn't know beans about syntax*. Now, if it doesn't make sense to talk about explicit performatives, it certainly doesn't make sense to define illocutionary force in terms of them.

The other quibble I have with Austin's and Cohen's position deals with the expressions *could be made explicit* (Austin) and *might have been so conveyed* (Cohen). An implicit principle, "Once an illocutionary act, always an illocutionary act," seems to be lurking here. But it seems eminently possible that the same type of effect can be achieved either perlocutionarily or illocutionarily. For example, we can warn someone of impending danger just by calling their attention to it, for example by pointing. Or one could cause someone to be warned by saying, "What a beautiful sunset!" if it so happened that a bear was standing between the addressee and the sunset. There is no doubt that warning can be an illocutionary act, but it

is very doubtful that every act of warning, verbal or otherwise, is an illocutionary act. Since the warning could always be made explicit, in order to correctly maintain that the illocutionary force of pointing or of the exclamation *What a beautiful sunset!* is never that of warning and still stick to Cohen's definition, one would have to claim flatly that warning is simply not part of the meaning of these acts. But this obviously begs the question.

On this score the linguistic definition does not seem to be in any better shape, since it also refers, although slightly more obliquely, to meaning. Now linguists, particularly generative semanticists, often behave as if they have special access to meaning. Because of the important role that sentence-meaning plays in the definition of illocutionary force which I have given, much of my research has been devoted to elucidating this behavior, that is, to finding and making explicit the criteria upon which linguists are willing to make claims about the meaning of sentences. For the most part, linguists have assumed that any aspect of the understanding of a sentence to which grammatical rules are sensitive is an aspect of the meaning of that sentence. Grammatical rules, here, include ordinary transformations, global derivational constraints, lexical insertion rules, and rules of semantic well-formedness. Recently, however, rules which have the power to influence the arrangement of morphemes on the basis of aspects of significance of sentences other than the literal meaning of the sentences have been suggested.[4] Unfortunately, such transderivational constraints, as they have been called, entirely vitiate almost every syntactic argument in favor of very abstract, semantically relevant syntactic deep structure, and among the most vulnerable are the sorts of arguments which have been given for abstract performative clauses.[5] It can't be had both ways. Such arguments are either valid or they aren't; either all syntactically relevant facets of the understanding of sentences are part of their literal meaning or none are. I have taken the conservative point of view that the kinds of syntactic arguments which have been advanced in favor of generative semantics do indeed hold some water, and that consequently one sort of transderivational constraint must be eliminated from the inventory of formal mechanisms in grammar. Linguists don't, in fact, have any special clairvoyant properties as far as meaning is concerned, and therefore should not be allowed to produce arguments whose first premise is, "The meaning of sentence S is M." By using standard formal arguments and letting the propositions fall where they may, however, a definition of sentence meaning can be achieved.

This is what I have done with reference to the aspect of meaning called illocutionary force. In all cases where I have found formal properties of sentences which correlate with pragmatic import, I have concluded that that import is reflected in the underlying syntactosemantic structure. Applying this criterion to sentences of imperative form, that is, to subjectless, tenseless sentences whose logical subject refers to the addressee, we find that at least the following are distinct covert illocutionary types in English which this surface syntactic pattern encodes: requests, warnings, contingent promises, instructions, orders, and suggestions. Each of these types is distinguishable from the others syntactically. There isn't always a single rule that marks a single sentence type, but when one considers the total syntactic behavior, the whole list of rules that each of these pragmatically distinct types is capable of undergoing, it turns out that each list is distinct.

Here is a set of properties that is sufficient for determining that the six types belong in separate syntactic categories. Where I mention a surface form rather than a rule of grammar, I am so unsure of the formulation of the rules involved that I do not wish to make any commitment--

but rules are surely at work.

1. The deletion of the second-person subject of imperative-form sentences is obligatory for most of the speech-act types that imperative form encodes. For warnings, however, the deletion is optional. Thus (8) can be many things, including a warning, but (9) can only be taken as a warning.

(8) Don't eat too much.
(9) Don't you eat too much.

2. Instructions are subject to a unique object-noun-phrase deletion rule under certain anaphoric conditions (see Sadock 1974a). In (10) the antecedent is in the first clause; in (11), a possible label, the invisible object noun phrase refers to the object that bears the label.

(10) Place chicken in the pot and boil.
(11) Keep out of the reach of children.

3. Both instructions and orders allow certain adverbs to be fronted. These are principally instrumental adverbs, infinitive absolutes, and *while*-phrases. The last two kinds of adverbials sometimes represent separate instructions or orders.

(12) With your right hand, pat your stomach.
(13) Placing the bird on its back, sew up the opening.

4. Certain directional adverbs can be fronted, but only in orders. The rule here does not seem to be especially productive.

(14) To the rear march.

5. Contingent promises, that is, requests to do something accompanied by a promised benefit, and warnings, that is, requests to do something accompanied by an indication of bad consequences if the warning is not heeded, occur as conditionals and as imperatives conjoined with declaratives. (15) and (16) are ambiguous between requests to feed a fish and warnings not to.

(15) If you feed my piranha, I'll show you my home movies.
(16) Feed my piranha, and I'll show you my home movies.

6. Warnings alone occur as imperatives disjoined with declaratives:

(17) Don't feed my piranha or I'll show you my home movies.

7. Suggestions, requests, and the imperative clause of contingent promises can be followed by an interrogative tag (see Green 1973).

(18) Have a sandwich, why don't you?
(19) Close the door, would you?
(20) Mow the lawn, won't you, and I'll give you a dollar.

8. Although an interrogative tag is formed with all three of the above, only suggestions and requests show up in straightforward interrogative form.

(21) Why don't you have a sandwich?
(22) Would you close the door?

(23) ??Won't you mow the lawn and I'll give you a dollar.

9. Suggestions are unique in several ways. One striking pattern consists of a *let's*-imperative followed by an interrogative tag. (See Costa 1972).

(24) Let's play *Old Maid*, why don't we?

In the simple interrogative form, suggestions can be reduced by the deletion of *you/we + do*:

(25) Why not play *Old Maid*?

10. All of the speech-act types considered here can show up as the subjectless, tenseless sentences called imperatives.

11. *Please* can occur immediately before the verb (or before the preceding auxiliary *do*) that expresses the action desired by the speaker in requests, contingent promises, and instructions, but not in orders, suggestions, or warnings.

(26) Would you please take out the garbage?
(27) Please mow the lawn and I'll give you a dollar.
(28) Please dispose of carefully.
(29) *Left please face.
(30) *Why not please move over a little?
(31) *Please don't you move a muscle.

These overlapping syntactic characteristics are displayed in Fig. 1.

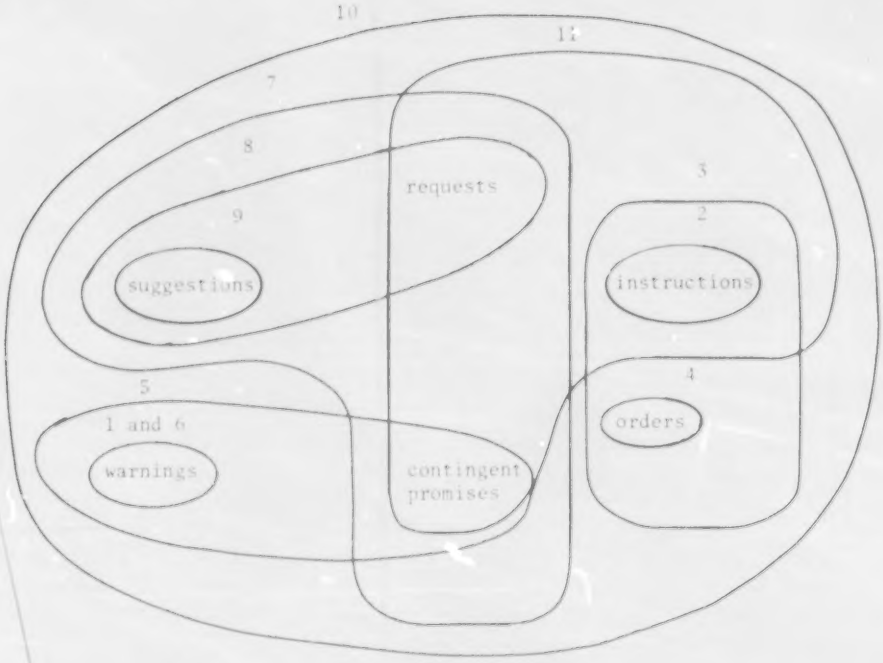
It may be wondered whether there are any pragmatic differences that are not reflected somehow or another in syntax. I believe there are. One sort of act which does not seem to be a separate illocutionary type in English is a threat. I have been unable to find any grammatical properties which differentiate threats from warnings, although I have looked fairly diligently. If such phenomena come to light I will, of course, have to change my mind and consider threats a distinct abstract speech-act type in English.

But what is the difference between a threat and a warning if they are not separate illocutionary acts? It seems to me it is this: we describe as threats those warnings for which we assume the warner has control over the consequences of not heeding the warning. In a similar way we may describe acts of asserting as blurtings out just in case the assertion was made hastily and, to some extent, against the blurter's desires. Yet clearly there is no illocutionary act of blurting out. I am claiming, then, that it is not a random fact that English lacks a surface performative verb *threaten*, but rather that this is reflective of the fact that for a principled reason there is no abstract performative verb with the the appropriate sense. I am also claiming that it is not accidental that we can use the surface performative verb *warn* to threaten, as in (32).

(32) I warn you that if you don't marry my daughter I'll shoot.

At this point I think it would be in order for an opponent of some or all of what I have been saying to wave an accusatory finger at the theory and its welter of unrelated, ad hoc predicates and cry, "Reductio!" This system, he might argue, has totally obscured the unity of the imperative construction: instructions, warnings, suggestions, requests, etc., all come out looking the same because they are the same.

Another counterintuitive result of my method concerns the fact that the formal properties which distinguish the various illocutionary types which my assumptions have led me to postulate are not entirely mutually exclusive. That is, it is not the case that there is a set of properties which distinguishes one type, none of which can be found in conjunction with another type. Rather, we find the partially overlapping properties displayed in Fig. 1.



1. Optional presence of 2nd-person subject.
2. Object-noun phrase deletion.
3. Adverb fronting.
4. Directional advern fronting.
5. Conditional form: imperative + *and* + declarative.
6. Imperative + *or* + declarative.
7. Interrogative tag.
8. Interrogative form.
9. *Let's* _____ ; *Why don't we?; Why not* _____ *?*
10. Imperative form.
11. Preverbal *please*.

Fig. 1

By merely postulating separate abstract performative predicates such as SUGGEST, WARN, ORDER, and so on, we not only obscure the pragmatic similarity among all these illocutionary types, but we also make the dubious claim that the distribution of the formal features which demarcate

each type is accidental. This scheme give us no ability to say anything about the fact that contingent promises behave like warnings in regard to some properties, like suggestions and requests in regard to others, and like suggestions, requests, and instructions with regard to a third set.

Fortunately, there is a straightforward way out of both dilemmas. Generative semantics allows one to claim that lexical items--most frequently verbs--are semantically complex. What, then, would prevent one from arguing that the abstract performative verbs which I have been forced to postulate are also semantically complex? In the case of the majority of abstract predicates which can manifest themselves by forcing imperative form on their abstract complements, then, it would be possible to postulate a shared illocutionary core, an atomic predicate which accounts for just as much illocutionary force as these sentences have in common and to which the similar behavior of their complements can be traced. I will consider in some detail one case where I believe exactly this is going on.

Impressionistically speaking, what all of the senses imperative sentences I have mentioned have in common is that they express a desire on the part of the speaker to prescribe some future behavior for the addressee. They are all explicit attempts by the speaker to impose his will on the addressee through the medium of language. Let me use the now-traditional label IMPERE for the abstract predicate which expresses just this. They differ, however, in the ostensible reason for this prescription. Requests, for instance, are those prescriptions the carrying out of which we understand would benefit the requester, while orders are prescriptions which are legitimized by the official status of the orderer relative to that of the recipient of the order. Now some ordinary surface verbs have been analyzed as containing a reason adverbial in their semantic representation. In Gallagher (1970), for example, we find *assassinate* analyzed as *kill* (which itself is semantically complex) *for political motives*. I wish to consider as analogous the case of the abstract predicates found in those sentences that I have called contingent promises and warnings. A contingent promise is a prescription for action whose communicated motivation is that the carrying out of the action would result in some effect which the speaker assumes the addressee would find desirable. Warnings, on the other hand, are negative prescriptions, proscriptions, that is, and offer as the justification for the proscription the belief that carrying out the proscribed action would result in an effect which the speaker assumes the addressee would find undesirable. The surface verb *warn*, in fact, reflects exactly these properties. One sort of surface complement which *warn* can take is a conditional *that*-clause. Now the consequent in this conditional can include such negatively loaded verbs as *make* but not such positively loaded verbs as *let*:

(33) I warn you that if you do that again I'll make you stay home.
(34) *I warn you that if you do that again I'll let you stay home.

Surface *warn* can also take an infinitival complement, but this complement must be semantically negative:

(35) I warn you not to smoke.
(36) I warn you to refrain from mentioning marijuana in my home.
(37) ??I warn you to give me a dollar.

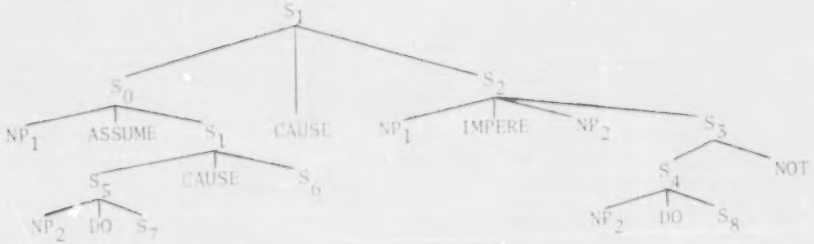
Warn can take both an infinitival complement and a reason adverbial

which can contain a conditional. In this case, the proscription and the antecedent may be the same proposition except for polarity:

(38) I warn you not to scream, because if you do I'll shoot.
(39) I warn you to be quiet, because if you aren't you'll wake up the children.
(40) ?*I warn you not to scream, because if you don't I won't hurt you.
(41) ?*I warn you to be quiet, because if you are we'll get away with it.

Notice that the explicit negative in the complement of warn can explain the fact observed some time ago by R. Lakoff (1969) that the antecedent in the conditional complement of *warn* can take negative-polarity items.

Taking all of these facts together, then, I postulate that the semantic structure of warnings, whether they are realized with the surface verb or not, is something roughly like Fig. 2, where all sorts of problems of modality, causation, tense, and so on are passed over.



$S_7 = S_8$, NP_1 refers to the speaker, NP_2 refers to the addressee, and the speaker assumes that the addressee does not desire S_6.

Fig. 2

Contingent promises, I suggest, have a deep representation much like Fig. 2, except that the negative in S_5 is not present and the speaker assumes that the addressee finds S_6 desirable. Ordinary requests might, at a guess, have a proposition expressing the speaker's desire for the addressee to carry out the prescribed activity in the reason-for-speak-act adverbial.

ILLOCUTIONARY ACTS

I have gone into detail about illocutionary force from the generative-semantic vantage point, but what is an illocutionary act, in this view? Certainly it is not simply those propositional acts involved in the illocutionary force of an uttered sentence, for such acts would be automatically successful upon completion of the utterance. Illocutionary acts are supposed to be capable of failing to be felicitious, to secure uptake, to take effect, or whatever. In this respect they are similar to perlocutionary effects. There is another way in which illocutionary acts resemble perlocutionary acts: the effect of both is posterior to the speech act. In most cases, the perlocutionary effects and the secural of uptake of the illocutionary acts are immediately posterior to the act of speech and give the impression of simultaneity with it, but there are cases where there is a noticable lag. The perlocutionary effect of amusing someone by tell-

ing a joke is one case in point. Among illocutionary acts, the same delay can be observed in the performance of the illocutionary act of christening a ship. Under one set of conventions, this effect is not achieved until the bottle breaks on the stern of the ship. If it fails to, the act of uttering, "I christen thee.., "does not achieve the christening and must be repeated. The illocutionary act in such cases is just as much the by-product of the utterance as are any perlocutionary effects.

Austin wished to distinguish between illocutionary and perlocutionary acts on the basis of whether one describes the act as having been accomplished in saying something (illocutionary acts) or by saying something (perlocutionary acts). While it does seem strange to describe clearly perlocutionary effects as having been done in saying, the following sorts of sentences strike me as perfectly normal:

(42) By saying, "I now pronounce you man and wife," Reverend Kornblatt pronounced them man and wife.
(43) By saying, "The evening star is bald," Fred asserted that the evening star was bald.

Illocutionary acts, then, have all of the characteristics of perlocutionary acts, but not vice versa. I suggest then that an illocutionary act is a special kind of perlocutionary act with characteristics which distinguish it from all other perlocutions, just as illocutionary force is a circumscribable kind of meaning.[5]

Some perlocutionary effects can be brought off independently of, or even in spite of, the meaning of an utterance, as when one yells in the ear of a sleeping person, "Don't wake up!" One can suceed in frightening someone by saying, "Boo," but it is clearly not the meaning of the utterance (if it's even proper to speak of its having a meaning) which is responsible for the success of the perlocution. On the other hand, there are perlocutionary effects whose success depends crucially on the meaning of an utterance. Many--but not all--kinds of jokes succeed in amusing because of what they mean. Or to take a different sort of example, if I am known to be an inveterate liar, I could convince my audience that it was raining by saying, "It isn't raining," yet a sentence with a different meaning, say, *The cat is on the mat*, would fail utterly to accomplish this. I will call those prelocutionary effects whose success depends upon the meaning of an utterance sense-perlocutions. Under the view that illocutionary force is an aspect of sentence meaning, illocutionary acts are sense-perlocutions.

An especially important proper subset of the set of sense-perlocutions consists of those effects whose success involves that aspect of meaning called force. Illocutionary acts are quite obviously members of this set, that is, they are *force-perlocutions*. To see that there are sense-perlocutions which are not force-perlocutions, consider the usefulness of presupposed semantic material. If there is no reason to doubt a speaker's presuppositions, we usually simply assume that they are correct, that is, we become convinced of their correctness. But what is presupposed material is, by definition, independent of the illocutionary force of the sentence in which it is found. All of the following sentences communicate a presupposition on the part of the speaker that Morton owned a Picasso. For this reason they may all equally well be used to get the addressee to believe that Morton owned a Picasso.

(44) Sam saw Morton's Picasso.
(45) Did you see Morton's Picasso?
(46) Take a look at Morton's Picasso.

(47) I promise to look at Morton's Picasso.

Now while every illocutionary act is a force-perlocution, not every force-perlocution is an illocutionary act. The most typical examples of perlocutionary acts, in the old, narrower sense which excludes illocutionary acts, turn out to be force-perlocutions, in fact. A certain question might be insulting under some circumstances, where the corresponding assertion might not. A promise might please an addressee by virtue of its being a promise, where another illocutionary act would fail to have this effect. What distinguishes illocutionary acts from other sorts of force-perlocutions is, first, the automaticity of the success of the act and, second, the very direct relationship between the act performed and the illocutionary force of the uttered sentence. For an illocutionary act to succeed, all that is required is the uttering of a sentence with a certain force under certain conventional conditions. These conditions, the felicity conditions, are established by society, are finite in number, and are generally such that it can easily be determined beforehand whether they are satisfied or not. It is for this reason that speakers are always held responsible for their illocutionary acts. While there are conditions on the successful performance of non-illocutionary perlocutionary acts, such as, say, that an addressee be sensitive about something in order to be offended by its mention, these conditions are neither conventional nor, in general, such that it can be infallibly determined beforehand that they have been met. The relationship between the illocutionary force of an utterance and the illocutionary act which is thereby performed is direct in the sense that having predicated the performance of the act of himself, the speaker has performed an act describable by the same predicate. Subsequent to the utterance of a sentence with the illocutionary force, *f*, if the felicity conditions have been met, then it is correct to say that the utterer has *f*'ed.

The direct relationship between an illocutionary act and the illocutionary force of an uttered sentence partially vindicates Austin's much-discussed claim that illocutionary acts are conventional acts (see, for example, Strawson 1971). According to the point of view of the present work, illocutionary acts are conventional not only in that the conditions which guarantee their success are conventional, but also in that they are directly related to aspects of meaning which, by the definition I have been using, always manifest themselves in terms of formal properties of sentences, that is, according to the conventions of a natural language.

The illocutionary force of a sentence has the unique ability to change the real world. In general the relationship between the meaning of uttered sentences and the real world is much more tenuous. For the most part, the meaning of an utterance is at double remove from facts about the real world. By uttering sentences with particular meanings, speakers convey aspects of their beliefs and attitudes. But this, of course, is a far cry from their actually having those attitudes or holding those beliefs. It is a serious mistake to claim that attitudes, beliefs, and so on find direct reflection in linguistic form. Rather, it is what we wish to do with our utterances that determines which, if any, of our feelings and estimations of the world we express through the medium of language. And because a speaker's true beliefs and attitudes are by no means indicative of real states of affairs, it is an even more serious error to pretend as though situations have a direct influence on the forms of language. While locutions like "If a speaker believes X, he says Y," or "If it has just stopped raining, the speaker would say Z," might be convenient, they and their kin should be prevented from masquerading as truthful representations of the way language functions.

FOOTNOTES

[1] See, for example, Ross (1970), Sadock (1969a, 1969b), G. Lakoff (1970, 1977), R. Lakoff (1968), and Davison (1973). For contrary views, see Fraser (1971, 1974) and Anderson (1968).
[2] But cf. Cohen (1971), 595-596.
[3] This phenomenon is discussed in more detail in Sadock (1972, 1975).
[4] Cf. Gordon and Lakoff (1971), Heringer (1971), G. Lakoff (1972, 1975).
[5] Cf. Sadock (1969, 1972, 1974b), Ross (1970), and Green (1973).
[6] A very similar view is expressed in T. Cohen (1973).

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What You Can Do with Words: Politeness, Pragmatics, and Performatives*

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In the history of transformational grammar, we can trace an interesting set of developments, from the earliest years to the present, with regard to linguists' views about the function of syntactic rules, their form, and their place in the total grammar.

The received theory has been, and in some circles still is, that syntax is essentially autonomous: a syntactic rule makes reference to syntactic phenomena and nothing else; all the information one needs to determine whether, in a particular environment, a syntactic rule shall apply is itself syntactic.

If one can make such an assumption with confidence, one finds oneself leading a comparatively easy life, syntactically speaking. The area of syntax is relatively small (compared, say, to what we emerge with if we throw in semantics and pragmatics); one can restrict the shape of one's rules quite nicely and severely, as well as restricting the sorts of phenomena the rules are to account for. In this way, the strict syntactician narrows down his possibilities, but he also gains the feeling that what he is doing is *possible*. He is not working with innumerable options, uncountable and uncontrollable conditions on hideously complex rules, and tangled hierarchies of acceptability between good sentences and bad ones. For the pure syntactician, the majority of sentences are either good or bad. Once you loose the torrents of semantics and pragmatics, you find yourself dealing with variation and variability in its infinite variety.

The purpose of this paper is, among other things, to discuss some areas where autonomous syntax fails to function as a viable theoretical construct. I will mention a few of the phenomena it cannot deal with, and must consequently rule out of linguistics. It is sometimes argued that pragmatic phenomena of the type I shall be talking about are indeed out of the purview of linguistics, since they are not, strictly speaking,

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grammatical phenomena, but rather reflect all sorts of non-linguistic facts about the speaker, his environment, and the real world. My position is that this is, technically speaking, balderdash. If two sentences are apparently synonymous, and if an addressee reacts one way to one and another way to the other, he is discriminating between them on linguistic grounds. If, conversely, I find that I may utter a particular sentence in one sort of social environment, but cannot appropriately utter the same words in another, although I have the same message to convey, I must suspect that this is part of my linguistic knowledge just as much as it is part of my cultural heritage, or whatever I bring to my interpretation of the sentence from my real-world experience. If the effectiveness of communication is at issue, I maintain that the problem is one for linguists to work on, often with the cooperation of other kinds of specialists (anthropologists, psychologists, sociologists, literary critics, and others), but it is in our range of competence. As we shall see, some of the rules that are most purely syntactic, or were thought to be so, have semantic and pragmatic environments that must be specified if we are to apply the rule correctly.

One problem that seems crucial if we are to make much progress in understanding how we speak, has received minimal attention from linguists: this is the question of *why* there is a transformational component altogether. Most of the phonological rules we can think of seem clear in their purpose: they simplify complex clusters, make it easier to get from one sound to another, dissimilate too-close sequences of sounds, etc. Of course, there are the puzzling exceptions, but by and large, we can generally understand *why* rules exist mediating between the phonetic and the phonological structures of a language. Would that the situation were analogous for syntax! True, in a few instances, reasons have been proposed for certain rules (such as equi-NP-deletion, or extraposition) on the grounds that these rules made surface structures easier to perceive and process than their underlying structures were (cf. Bever and Langendoen 1972). And there are some rules the reasons for which are more or less transparent (like Y-movement and many topicalization rules generally), but by and large, why we need most of the rules that we have found to exist in syntax, and more specifically, why they exist, in language after language, in the form in which they are found, is an enigma, and one we shall have to understand if we are to produce a credible grammar of any language, let alone a credible theory of language. Among the hardest cases are those where the change in structure between logical and surface form does *not* make for clearer perceptual strategies; where, in fact, the change may complicate the structure and make the communication harder to decode than might be desired. What I want to do in the course of this paper is look at some of these particularly nasty cases, to see if we can supply any reasons for the existence of such complicating rules, whether in the syntax proper or in other areas of our communicative competence.

One such problem arises when what is said is the opposite, or very nearly so, of what is meant. Sometimes this is signaled by special words or intonation; in writing and among more subtle speakers, it is not. If we assume that the business of grammatical rules is to make logical structures more intelligible, what are we to do with a situation where, presumably by some "rule of sarcasm," sentence (1b) is uttered meaning its apparent opposite (1a):

(1) a. John is an idiot.
    b. John's a real genius.

or when an apparent declarative utterance, (2b), is to be taken as the imperative, (2a):

(2) a. Open the door for me.
b. That's right, just sit there while I try to open the door with my broken arm.

In the case of sarcasm, we can make a few generalizations. First, that one generally says something superficially "nice," when being sarcastic, and means something uncomplimentary, rather than the reverse. (3a) is an unlikely candidate for a sarcastic means of expressing (3b):

(3) a. You're terribly thoughtless!
b. How thoughtful you are!

Second, it seems likely that sarcasm must be used when the conveyed meaning of the sentence is construable as offensive to somebody, often the addressee, though just as often some third party.

Sometimes, too, sarcasm does not consist of the "opposite" of the statement itself, but rather means, "I don't believe what I am saying"--that is, rather than the content of the statement being reversed, one of the felicity conditions normally underlying a successful declarative utterance is negated:

(4) I see Nixon's vindicating himself on TV again.
(5) Nixon's support in the polls has gone way up--from 26% to 27% in a single month!

And we should not make the mistake of assuming that the sarcastic sentence (1a) is really the complete equivalent of its opposite (1b). They are not mutually substitutable; rather, there are distinct environments in which sarcasm is appropriate, and others where the straight negative statement is the thing to say. So a rule that reverses positiveness of a sentence in the environment [+sarcastic] or any such *ad hoc* device will be unsatisfactory, as should be evident.

Another difficult problem to note briefly in passing is that of distinguishing between sarcasm and irony. Basically, sarcasm is exclusive of the speaker: it makes mockery of someone else, while irony usually includes the speaker as one of the targets. Hence one is not usually hurt by irony directed at one, since the director is a target too; but sarcasm is generally painful. Another distinction is that *things* can be ironic, while sarcasm seems necessarily to be performed with malicious intent, like lying, and therefore can have only a human (for some people like me, also feline but not, for example, canine) subject.

(6) a. It's ironic that Nixon got himself into all that trouble because he wanted the greatest landslide in history.
b. *It's sarcastic that Bill's a real genius.

But this gets us no closer to linguistically-relevant rules for sarcasm and irony. The problem here is that these are cases where the surface structure is quite far from the logical structure, but not a full 180 degree turn away. If it were the latter, we would find it relatively easy to formally characterize the relationship between the intended meaning and the surface structure. As it is, the linguistic theory sophisticated enough to relate even simple cases of sarcasm to their underlying structures has not been envisaged, nor is it likely to be for some time, let alone a theory able to predict when a structure will be interpreted as sarcastic or as ironic.

Sometimes, we don't say a thing directly because the thought under-

lying it is abhorrent to recall or express, or it is feared that the addressee will think so. So we may resort to (7a) when we mean (7b):

(7) a. How about a roll in the hay?
b. Let's fuck.

(It is a corollary of this fact about euphemism that makes a sentence like Paul Postal's (8) famous for reasons other than its linguistic importance:

(8) The blonde got it caught in the fan.)

Here, there is an apparently extra-linguistic reason why (7a) means what it does, as well as why we have chosen a roundabout way of saying what we mean. This is one more reason why we must incorporate pragmatics into linguistic descriptions, or else risk counterexamples to the claim that the application of rules facilitates the understanding of sentences. We will eventually want to establish a hierarchy governing the application of rules: ease of understanding the message sometimes takes precedence over other factors--but, as we shall see, sometimes it does not.

Another odd sort of locution occurs when we are in a position where the only thoughts that come to mind are critical, but manners demand we say something (and something nice, at that). The well-known rule of linguistic popularity, "if you can't say something nice, don't say it at all," and its corollary, "if you don't say anything at all, I'm going to be insulted," are at work here, but because these rules are known to be in effect in such situations, such statements are seldom taken at face value. So the (a) sentences of the examples below really convey the same meaning as the (b) sentences; an addressee familiar with American conversational ritual can immediately translate (a) as (b). Occasionally, of course, we are dealing with a real ambiguity: not only has the speaker *said* (a), he means (a). The very fact that we find such ambiguities should indicate to us that phenomena such as this are part of the rules we use to understand language, and cannot be exempted from linguistics, any more than we can leave them home from cocktail parties.

(9) a. We aren't getting any younger.
b. You're looking old.
(10) a. Margaret is so capable.
b. Margaret is ugly and generally undesirable, but she washes dishes nicely.
(11) a. Her cakes are so *moist*.
b. Her cakes taste like cotton batting, but wet cotton batting.

(Grice has discussed such cases under the rubric of conversational implicature, a topic we shall return to at length later.)

The same sort of indirectness is sometimes found in declarative sentences used to convey commands or requests:

(12) a. It's hot in here.
b. Open the window.

Then there are other types, more directly related in superficial form to the meanings they convey, but also more complex superficially than the underlying sentences. In each of the following, the (a) sentence is the more complex case, the (b) sentence its simpler approximate denotative equivalent:

(13) a. Please pass the salt.
b. Pass the salt.
(14) a. Can you pass the salt?
b. Pass the salt.

In Gordon and Lakoff (1971) a formal scheme is proposed to handle some of the relationships among some of these indirectly-conveyed meanings and their surface structures. It does not, however, tell us why the particular surface structures that occur do occur, although it does provide some interesting possible explanations for how we understand as we do those conveyed meanings we find.

Much has been written about the syntax and semantics of tag sentences[1], but the question begged by everyone (among whom I am proud to include myself) is *why* tags are used at all. Clearly tag-formation is a complex rule to state, and clearly it complicates the superficial structure of sentences. Sometimes, at least, (15a) seems to be roughly equivalent to (15b), (16a) to (16b):

(15) a. That's John's mongoose, isn't it?
b. I think that is John's mongoose, but I'm checking to be sure you think so.
(16) a. Take the garbage out, won't you?
b. I'm telling you to take the garbage out, but I can't be absolutely certain you'll do so.

Tags have the effect of hedging--protecting a speaker from the consequences of his speech acts. They give (a command, a declaration) with one hand and take with the other. As such, they are very useful devices, but their function cannot be discovered purely through recourse to syntax. Looked at from a syntactic point of view alone, the rule of tag-formation appears a useless excrescence on the face of transformational formalism. (Moreover, tag-Q and tag-order formation, for many reasons, cannot be identified with each other when looked at as purely syntactic phenomena. Yet these complicating, idiosyncratic rules are in many ways alike. Their true similarity is discoverable only with reference to their pragmatic functions: the conversational situations that permit their use.)

Related to tags quite closely (pragmatically if not syntactically or semantically) is the use of a group of verbs of thinking, in the first-person singular present, to introduce declarative sentences. Here, too, we cannot take the surface forms at their face value. These verbs in these environments do not describe an act of cogitation; rather they have a softening effect on the declarative illocutionary force of the sentence. Compare the sentences below:

(17) a. I guess we've got to go now.
b. We've got to go now.

Sentence (17a) is not a statement about the speaker's mental processes, therefore it is not possible for the addressee to comment on that part of the speech act with a rejoinder like (18):

(18) You're a good guesser.

When such verbs like *guess, think,* and *believe* are used to describe the speaker's act of cogitation, sentences like (18) do constitute possible rejoinders. Compare (18) as a reply to (19):

(19) (How many beans are in the jar?) I guess there are 1806--how

close am I"

In an earlier paper (R. Lakoff 1969), I said that verbs like *guess* in (17a) were being used "performatively." Rogers (1974) has quite correctly criticized this formulation: obviously by *saying* something I'm not *performing* an act of guessing or thinking, so that these verbs *per se* are not performative. But I think that the presence of one of these verbs in the surface structure represents a logical structure containing the abstract performative verb [say], when the sentence is uttered in a specific pragmatic context: namely, that the speaker wishes to divest himself of some of the responsibility for his assertion. In this respect these verbs perform a function similar to that of tag questions and hedges, discussed below.

In any event, it is interesting to note that, under this (admittedly sketchy and preliminary) proposal, a superficial lexical item like *think* and *guess* may have at least two distinct derivational histories, arising from either of two logical structures. In the "simple" use of *guess*, exemplified by sentence (19), all the meaning postulates that constitute and underlie the surface verb *think* are present in the logical structure, under the *verb* node if there is one. But for the more complicated type, exemplified in (17a), the verb is a composite of a set of meaning postulates (in the logical structure) *and* a set of pragmatic conditions that must be met. In this respect the distinction between what we might call the "two verbs *think*" is greater and more complex than between, for example, Postal's (1970) "two verbs *remind*," all of whose distinguishing characteristics were to be found in the logical structure.

Close pragmatic relatives of the two sentence-types above are the hedges discussed by G. Lakoff (1972). They may hedge entire speech-acts, that is, dilute their illocutionary force, like the verbs just discussed, or parts of speech acts, or lexical items within sentences. Compare, for example, (20a), where the hedge *sorta* modifies an adjective explicitly present in the sentence, and (20b), where it modifies or dilutes the force of the declarative speech act by modifying the abstract performative verb [*say*], not present in the surface sentence:

(20) a. John is sorta dumb.
b. It sorta seems like I've told you that a million times already.

Passivization is the most obviously syntactic case of a rule that complicates the logical structure--probably for reasons of added pragmatic communicativeness--but the facts are not well understood. A great deal has been written on the form of the passivization rule, and on "motivating" a transformational relationship between active and passive sentences. What is left largely unexplored is the reason why we have both actives and passives, and, moreover, granting that this is a bizarre rule in many ways, why it exists in so many languages. I will say no more about the many problems of passivization here, since I have amply exposed my perplexity elsewhere (R. Lakoff 1971).

We now come to the pragmatic, though not syntactic, converse of the verbs of thinking: sentences in which the performative verb is explicitly realized. Although the presence of explicit performative verbs ought not, in theory, affect the interpretation of sentences, sentences that contain them are not equivalent to simple sentences without overt performatives, any more than are "hedged" utterances containing tags, verbs of thinking, and hedges. It had been a great worry for adherents of the so-called "performative analysis" that sentences containing explicit performatives

were not equivalent to sentences with "abstract" ones, as this seemed to be a counterexample to the claim. Actually, there was no need to look at things this way, any more than there is a need to assume actives and passives are fully equivalent. Obviously, as in all these cases, we have two or more options, and they are not entirely free options: rules are applied for a reason. Just as we find virtually no cases of exact synonymy between lexical items in a language, there is no reason why we should expect two sentences to be exact paraphases of one another. It's possible, but not necessary. Indeed, in the interest of economy of the grammar, it is in a sense to the advantage of a grammar to have as few overlaps--like synonyms and paraphrases--as possible. Why have two ways to say the same thing when one does as well? That this is the case in sentences with and without superficially present performatives can be seen by comparing the following:

(21) a. I'm telling you that I'll do it.
b. I'll do it.
(22) a. I'm telling you to slop the hogs.
b. Slop the hogs.

The (a) sentences in these two examples are most apt to be used in case the speaker has reason to suppose the addressee won't do his part in making the speech act successful. For instance, in (21a), the speaker has reason to fear he won't be believed (a necessary condition for a successful declarative utterance); in (22a), that he won't be obeyed. Otherwise, there is no reason to reinforce the performative. Although sentences with explicit performatives may seem the antithesis of sentences with hedged performatives, actually they're not that far apart pragmatically: both occur where the speaker lacks self-confidence, both are opposed to the simple unembellished speech act, and both represent excrescences added to the simple logical structure in the interest of making it clear how you feel about what you're saying, rather than being merely concerned with the transmission of information. (For discussion of this problem, cf. Larkin and O'Malley 1973.)

Also paradoxical (if we assume that communicating pure information is the business of language) are locutions in which the superficial length of the utterance far surpasses its communicative content. By all rights, such sentences ought not to exist; they say the same thing as other sentences, but more slowly and less efficiently. Yet they do exist. And, of course, as Grice and others point out, they are not equivalent to the shorter versions, exactly. The very fact that there is a violation is a signal to the addressee that something out of the ordinary is up. We shall discuss this notion of signaled violation later at length, along with the question of how the combination signal-violation works to impart more or different communicative content to an utterance than the simple case, devoid of both signal and violation, contains. For instance, the (a) sentences in the examples below correspond in connotation, though only crudely, to the (b) sentences:

(23) a. It can be said of Miss Gruntz that she is perhaps not the most accomplished accordionist in Bloomington, Indiana.
b. Miss Gruntz plays the accordion badly.
(24) a. Do you think you could perhaps lower your voice a few hundred decibles?
b. Shut up!

It is well-known to everyone who ever attended high school that many

of the items on the foregoing list are the special banes of your average English teacher, whose function is to inculcate in her students a passion for clear and precise diction. I and many people I have known have been warned never to use particles or hedges; not to begin sentences with "I don't think," because that showed you weren't thinking or with "I guess" because that showed you were only guessing; never to substitute the passive for its corresponding active; and to say things directly and succinctly. As we shall see, your average high-school English teacher showed thereby that she had an excellent inborn intuition about the rules of conversation and how they were to be applied, but she didn't confront one problem: that real conversations seldom follow the rules of conversation and that deviations are always to some purpose, however mysterious or seemingly counter-productive to the interests of efficacious communication. Maybe *like*, and *I guess*, and passives are sloppy or demonstrate a slothful turn of mind; and maybe there are real reasons why we can't get along without them. We shall see.

We have seen in these examples that recourse to syntactic explanations won't help us understand much of language use; we must, in fact, look at the pragmatic aspect of communication and ask what communicative effect is achieved by the use of these devices. We find that there are, indeed, two basic motivating forces that cause us to adhere to or violate our syntactic precepts. Stated briefly, these two rules of pragmatic competence are: (1) *Make yourself clear*. (2) *Be polite*. These are the pillars of our linguistic as well as non-linguistic interactions with one another. Usually we don't get into too much trouble, we find we are pretty well understood even while staying within the basic rules governing politeness, and we find we can be polite or at least civil without impairing our intelligibility in communication. The crunch comes when a conflict arises. What will happen when rules collide? Will a speaker opt to be polite, and misunderstood, or impolite or brusque, and clear? These are the questions I want to look at in the rest of this paper. In particular, I shall address myself to questions like the following:

- Are there "rules of politeness?" How do such pragmatic rules compare in form and function with better-understood formal linguistic mechanisms--phonological and syntactic, maybe even semantic, rules?
- We know there are non-linguistic as well as linguistic ways of being polite (for instance, those ingeniously noticed and beautifully described in the works of Erving Goffman, where we see that non-linguistic politeness can be reduced to precisely-describable and predictable actions). Are the two connected? If we can show that they are, we have made an interesting discovery--that linguistic rules are, perhaps, subcases of more far-reaching human behavioral rules. Linguistic competence is only one type of cognitive competence; proper non-linguistic behavior can be thought of as "grammatical," aberrant non-linguistic behavior as *'d; that is to say, non-linguistic human behavioral patterns can be reduced to the same formal sets of rules as linguistic patterns are: often they will share rules, as we hope to show here. Hopefully this remark will not get the advocates of human freedom and theological free-will upset. We're not, as everyone should know by now, setting up prescriptive rules for the way people are supposed to behave, any more than the rules in Chomsky's *Syntactic Structures* told people how to form nice sentences. We are describing what we see--reducing the apparent chaos of human interaction, linguistic and otherwise, to predictability. This does not mean we can predict what you will do, any more than knowing the rules of English syntax allows us to predict what you will say. We graciously leave you your autonomy; all we want to do is to understand, say, why word B follows word A in a sentence, why action A generally precedes action B in a non-linguistic transaction. This understanding

comes in the form of rule-writing. Our working hypothesis is that these two forms of prediction involve similar kinds of generalizations, similar sorts of formalisms.

• We know there are "orderings" of linguistic rules, whether in the traditional transformational sense of ordered rules or whether the ordering is done in other ways. We know that different results may obtain if Rule 1 works on the output of Rule 2, or vice versa--that sometimes one rule must have applied (even in a case where normally the rule is optional) in order for another rule to be able to apply. Is there a similar process in these pragmatic rules? Are rules sometimes mutually exclusive, sometimes necessarily ordered in a particular way? Can one conceive of misorderings of such rules and the aberrations in behavior that might result? I am suggesting, then, that the mechanism we have found to be operative in formal linguistics might just be part of the general human conceptual system by which we order the world and arrange ourselves within it. And we might find parallels to syntactic behavior in pragmatic behavior, and beyond that, in non-linguistic behavior.

This paper will barely touch on these broad questions: it remains for the future to formalize what I shall suggest informally here. But there do seem to be striking parallels of various sorts between purely "linguistic" syntactic behavior and this wider realm of paralinguistics, pragmatics, call it what you will.

With these provisos in mind, let us return to the questions I posed a few minutes ago. Suppose we know it is necessary, in most human verbal (and, of course, nonverbal) transactions, to make your intentions clear while at the same time avoiding offense. What happens when a conflict arises?

We can answer this only by first understanding more about the rules of clarity and the rules of politeness, so that we can see more precisely in which respects they might collide and what the results of different sorts of collisions might be. We have, fortunately, a preliminary understanding of what we might call the rules of clarity--namely, Grice's (1968) rules of conversation, which exist precisely for the reason of communicative clarity. They dictate saying as much and no more than is necessary; saying what is true, what is relevant, and saying it in a non-confusing way. Grice's cooperative principle dictates that we strive to be unambiguous in verbal interaction; that, further, when there appears to be ambiguity, we assume there is something deeper going on. We might, in fact, want to refer to something like a "principle of mutual sanity," that is, each participant in a transaction assumes, unless given strong reason to abandon this belief, that the other person is acting rationally, doing and saying things for the ultimate purpose of achieving communication in the most direct way. Any apparent violation is to be explained by recourse to other principles--like the rules of politeness, as we shall show, or the dictates of certain formal styles, like poetry or drama, which impose special additional constraints in return for extra rewards. Maybe, too, we want to suggest an application here of the Platonic Art of Measurement--if you have to work really hard to understand something, you will, or should, get correspondingly more out of it than if the communication were crystalline in the first place. (We will have to permit exceptions to this rule for scholarly papers, of course.)

Let me summarize Grice's maxims of conversation, bearing in mind that we are looking at them rather broadly here, as principles of interpersonal competence, extending beyond purely linguistic transaction.

(1) *Quantity: Be as informative as required/Be no more informative than required.*

(2) *Quality: Say only what you believe to be true.*
(3) *Relevance: Be relevant.*
(4) *Manner: Be perspicacous; don't be ambiguous/don't be obscure/be succinct.*

We may note here that:

- Violations exist, both intentional and otherwise. As we shall show later, intentional violations are generally committed in order to conform to another set of rules that would be violated by strict adherence to the rules of conversation.
- The normal informal conversation deviates markedly from Grice's rules, usually with prior signaled warnings to that effect. A conversation that observed these rules literally would be unbearable to engage in, or to listen to.
- The rules hold for other types of actions, if we can make necessary changes in their formulation. Thus if, for instance, you are walking down the street with someone, you need to give him clues as to your intentions: which way you will walk, where you will stop, when you will slow down, and so on. Walking with someone then is a cooperative action in some ways parallel to talking with someone. So you will (not quite consciously, in general) indicate where you will walk, and so on, by rather subtle movements of the body. You will observe quantity: moving only so much as to get where you're going, and at the same time indicate to the other person the way in which you're going about getting there. Superfluous movements like arm-flailing, kicking and so forth are viewed strangely, and concealing one's intention to turn a corner until the last moment will also throw your partner off. You make only the moves that really get you where you're going, no "false" moves, which would be equivalent to linguistic lies. Obviously the rules are simplified in this case, since walking is inherently a simpler set of actions than talking, but the basic point is there.

Like the rules of conversation, the rules of politeness are designed to get people through cooperative transactions with a minimal amount of wasted effort, or friction. Unlike the rules of conversation, they are to some extent mutually exclusive: different ones are applicable in different real-world situations, and applying the wrong one at the wrong time may cause as much friction as not applying any. We may state them as follows:

(1) *Formality: Don't impose/remain aloof.*
(2) *Hesitancy: Allow the addressee his options.*
(3) *Equality or camaraderie: Act as though you and addressee were equal/make him feel good.*

So, for instance, *Rule 1* is followed when the speaker keeps his distance from the addressee; neither asks about his personal affairs nor tells the addressee about his own; does not use particles like "you know," "I guess," "well," since these tend to reflect personal attitudes of the speaker; and does not guess at attitudes of the addressee. This is also the rule that governs "proper" behavior in other ways: using correct table manners (that is, not enforcing the effect of your presence on others); not interrupting; not coughing or sneezing without an attempt at concealment (these were considered impolite long before the germ theory of disease transmission); using locutions like "one," the passive, impersonal forms; and in languages that have them, using the "polite" form of "you," and sometimes other pronouns as well, marking distance between the speaker and the addressee. Hence, the proper butler, ever maintaining *Rule 1* aloofness, says, "Dinner is served," not "You wanna eat?"; the democratic American

host, however, says "Let's eat."

The use of title + last name, rather than first name as a form of address is a form of *Rule 1* politeness: it maintains distance between speaker and addressee. And we find still another linguistic use of this rule in the use of technical terms in academic and business situations as well as in conversations with doctors, lawyers, and so on. That is, their use of technical language in talking to clients, while a desire to keep them mystified, is also a means of ensuring that status distinctions are adhered to, that no informality develops, that the relationship remain purely formal. Here, too, we find the use of technical words for sexual and excretory functions (as opposed to true euphemisms, which we shall take up next). The effect is to produce emotional distance from what is being discussed, rather than embarrassment about it or a desire to avoid talking about it at all, as euphemism does. And this may be why some people, at least, feel repelled or amused at hearing a child say he has to "defecate," while his use of a euphemism like "b.m." or "caca" seems much more in place: formality is not a child's option. And, of course, *Rule 1* is most strongly enforced where camaraderie would be, socially speaking, most dangerous, yet where it is important not to actually give offense by suggesting that the addressee is not up to the speaker's standards for association. *Rule 1* allows the speaker to make no overt comment on the relation between his own status and that of the addressee; he remains distant. So where we most often address colleagues, after a fairly short time, by first name alone, it is often easier even after long acquaintance to address cleaning women, janitors, and so on by title + last name.

Violations of *Rule 1*, where it might ordinarily be applicable, do occur; in these cases, depending on the nature of the violation, who the violator is, and his relation to the violatee, we may describe the action as "gross," as "being familiar," or as "having no breeding," all somewhat old-fashioned terms, seeming to indicate that this rule of politeness has fallen on evil days here. Also, the rule may be applied where ordinarily in our culture we would not apply it; in this case we may say that the applier is pompous, stuffy, standing on ceremony--terms which are more or less frequent by comparison. So we might gather by counting frequency-of-possible violations that in our society (American academic middle-class) it is much more noticeable, and much less forgiveable, to violate the rule of formality by applying it where it was inapplicable than by not applying it where it is normally applicable. I would suggest that in older and more stratified societies, such as are found perhaps to this day in Europe, the reverse may be true.

Rule 2, permit addressee to decide his own options, is at first glance apparently another phrasing of *Rule 1*. But actually it is applicable in different contexts, it is violated in different ways, it interacts differently with other pragmatic phenomena, and violations are interpreted quite differently. We are making much use here of the notion, "violation of a rule." We are talking about ungrammatical cases, cases that normally don't occur, and we are constructing them for ourselves. This points up one of the uses of the introspective method of doing pragmatic work: we might listen to tapes, or quiz informants, for years before we encounter some kinds of possible politeness-rule violations. Most of us, in most situations, are too well-bred to violate these rules: we know what trouble we'd get into if we did.

It is argued that the new generation has no use for these rules, is composed of free spirits not weighed down by these mundane considerations, but actually, some preliminary research suggests that they have developed inviolable codes of their own: who do you pass joints to, how do you re-

fuse a toke, how do you address and refer to couples of various sexes in various stages of non-marital togetherness? All of these are problems for the next generation of Emily Posts, and I wish them luck. However, to return to the topic of the normal rules of politeness for us fuddy-duddies over 30, it is clear that we must resort to constructing cases of our own if we are to be able to formulate the rules correctly and determine their ranges of applicability, as we shall see. For we can only determine the grammar with reference to the ungrammatical, and the ungrammatical by definition exists largely in the mind. If we encountered them often enough to record them, they wouldn't be ungrammatical.

We return to the definition of the second rule: *give options*. We have called it the rule of hesitancy, since the effect of giving someone else options is often to seem indecisive yourself, in order to let *him* decide. Of course, trouble sometimes results from overzealous application of this rule by two consenting adults: if both participants in a decision-reaching situation each elect to put this rule in force, you get a stalemate: "What do you wanna do?" "Oh, I'll leave it up to *you*." Nonlinguistically, this is sometimes seen in front of doors, when neither of two people can decide who is to precede whom. Another problem is that this form of politeness, like the others, is very often conventional, rather than real. I, the speaker, want to appear polite by giving you, the addressee, a choice; but for any of various reasons, you, the addressee, have no choice, and you had better recognize that fact and act according to the real situation, not the conventional one. But often the speaker himself is in a bind: he knows the situation doesn't really permit the addressee to have a true choice, but he must make it look as though he does, for the sake of politeness, and the addressee in turn must know, and so on, into the night.

We find many linguistic manifestations of hesitancy, some genuinely expressing uncertainty (that is, not used as politeness devices at all); some used as true politeness devices, but only conventionally expressing hesitancy (the speaker knows what he wants, but sincerely does not wish to force the addressee into a decision); and some used as conventional politeness (the speaker knows what he wants, knows he has the right to expect it from the addressee, and the addressee knows it, too). This is a form of linguistic ambiguity: we may perhaps call it contextual ambiguity, since it is disambiguated by a number of contextual factors, such as the real-world relationship between speaker and addressee. The use of questions of many types, or question-intonation, where a declarative actually fits the true conversational situation; the use of tag-imperatives, or "please," or both, with instructions; particles like "well," "er," and "ah"-- all are examples of *Rule 2* politeness. The use of euphemism is another.

Why? The use of technical terms to avoid direct mention of things it is impolite to directly mention, as noted, deflects the talk away from the emotional sphere, and hence removes some of the embarrassing connotations; this makes technical terms suitable for scholarly discussion, medical shop-talk, and such professional uses. An anthropologist who can talk without batting an eyelash about *copulation* among the Whango-whangos would die before talking about the same tribe *fucking*, or even *having intercourse*, and certainly it would destroy his professional profile if he were to refer to their practices as *doing it*, or *rolling in the hay*, or *having a party*. But adolescents telling dirty jokes will use the latter terminology, not the former, which sounds to them stiff and ugly and pointless in that it removes the emotional content of the terms.

Euphemism, then, seeks to give the addressee a way out of having to face the facts as facts: it gives him (at least conventionally, again) a different way of looking at a potentially unviewable notion. Thus, euphemism acts as a *Rule 2* device where technical terms are a *Rule 1* device.

Here, too, we find hedges: the use of words like *sorta* and *in a way* and *loosely speaking* are ways of leaving the final judgment up to the addressee as to the definition of the whatever-it-is. So it is a little nicer to criticize someone by saying (25a) than by saying (25b):

(25) a. That was sorta stupid of you.
b. That was stupid of you.

Again, we should probably think in terms of conventional usage. G. Lakoff (1972) talked about hedges as changing distribution curves in regard to the truth of statements containing adjectives like *tall, stupid,* etc. But here we really aren't changing our interpretation of the addressee's stupidity. In both cases, it is likely that the speaker thinks the addressee was equally stupid; *sorta* is not a qualifier in the same sense that, for instance, Lakoff spoke of hedges as being. He discussed, for example, *kind of tall,* where someone 5'11" might be so described, but not someone 6'5". But the same act of stupidity might be described both by (25a) and (25b)--the main difference being not in how stupid the speaker views the act as having been, but in how angry he wants to risk making the addressee. Just as question-forms may be used to express conventional uncertainty, so hedges may be used for the same purpose.

Finally in this category, as we have already suggested, are the cogitatives--words like *suppose, guess,* again often used conventionally to soften a declaration where the speaker in truth feels strongly enough to have uttered a pure declarative. Framing a statement as a cogitative act rather than a declarative act leaves the addressee free to believe or not. Tagging a statement does the same. Similarly tagging an order or prefacing it by *please* has the effect of making it a recommendation rather than a requirement that it be obeyed, again leaving the addressee options, however conventional. But we always will retain the proviso that, when necessary, options are revoked; duress may be used if justified. And it is thus by a sort of double-switch that locutions like *You must have some cake* are rendered polite: ordinarily this is rude, as it cuts off options, but if the cake is the speaker's own, the deeper suggestion is that the addressee will eat the cake only under duress. Now we must note that another effect of the existence of *Rule 2* is that it is considered rude to fish for compliments, or compliment oneself--that forces the addressee to act in a particular way. (In general as we shall find, forcing someone to violate a rule of politeness itself constitutes a violation.) Now here the speaker is indirectly un-complimenting herself (or himself). So she is acting perfectly in accordance with the rules of politeness at one level, and this supersedes the apparent violation at another point. In the same way, a sentence like "You may have some cake," spoken without provocation, is an insult, although it gives the addressee the options he desires: it is an insult because of the implication that the addressee *would* want the cake, as well as the fact that, as we shall see, it violates *Rule 3* by setting up the speaker as superior to the addressee, able to make enabling acts and grant requests, as well as deserving kudos as a terrific cook.

Here, too, we can distinguish direct imperatives from those derived by implicature. Obviously, it is more polite (at least sometimes) to issue an order indirectly, since it theoretically leaves the addressee's options open. (Again, often merely conventionally.) On the other hand, sometimes an indirect imperative may be felt as ruder than a direct one: to say grandly "It's cold in here" is to imply, sometimes, "My wish is your command"--that is, to imply, "If I say anything to you, you are to construe it as an order; I am so far superior to you." In other words, it may be taken as a violation of *Rule 3*, when all the speaker wished to do was not

violate *Rule 2*.

There may well be different idiolects for politeness: what is courteous behavior to me might be boorish to you because we have slightly differently formulated rules or because our hierarchy of acceptability is different. Thus, for instance, in certain cultures it is considered boorish to ask how much someone else's possession costs. This is because such a question is felt to violate *Rule 1*, or perhaps *Rule 2*. But *Rule 3* directs, among other things, that we should show an interest in the other person's personal affairs, and compliment him on his taste and financial success. So for some people, such a question is a warm and courteous way to begin a conversation. For the former group, *Rule 1* takes precedence over *Rule 3*, at least in this regard; for others, *Rule 3* supersedes *Rule 1*. It's a matter of upbringing, as we have suspected all along, but a matter of good grammar, rather than good taste.

A useful working concept here is Goffman's[2] notion of free goods. This is most often used in reference to material things--those things that another person may make use of without special permission on the part of anyone are felt to be "free goods." The interpretation of something as free goods will change depending on personal relationship and physical situation. So, for instance, a dish of hoisin sauce in the center of the table at a Peking Duck dinner is generally regarded as free goods by anyone at the table: anyone may pitch in and help himself. But that same dish, if at the elbow of one of the diners, is his property, by virtue of its location, and no longer free: you must ask permission to borrow some. The concept of free goods is probably *Rule 1* related: you impose by appropriating non-free goods. (I am told that in the counter-culture this concept is being eroded; it is considered quite all right to ask casual strangers for bites of sandwiches at restaurants, and boorish to refuse.)

This concept can be extended to linguistics. Clearly, there are some topics that one may ask about freely, and others that are "none of your business," that is, violations of *Rule 1* to ask about--non-free goods. It is also possible to appropriate non-free goods by giving orders when you are not in a position to order, or the order is unreasonable, or by telling the person something that it is not your prerogative to tell him. Of course, these might be looked at as violations of *Rule 2* as much as *Rule 1*; you are imposing on his inner space, giving him no way out, and leaving him unable to exercise his options as to what to hear or do.

Just as the seeker must excuse himself before grabbing when non-linguistic nonfree goods are sought, so must the linguistic nonfree goods seeker excuse himself when information is sought. He does this by means of questioned explicit performative uses.

(26) a. May I ask where you were last night?
b. May I ask how much that Greek vase cost, Mr. Hoving?
(27) a. May I tell you something--your slip is showing.
b. May I say that I have enjoyed your company very much.
(28) a. May I ask you to reconsider your resignation?
b. May I ask you to help clear the table?

Such complex locutions occur only in case the speaker fears he is invoking unfree goods: when a question cannot be construed as impertinent, it cannot occur in this form. (29) would normally be usable only in case the question "How much is 36 times 8" had deeper meaning, in the context of the conversation, than it usually does, e.g. was meant as a means of hurling an accusation at the addressee.

(29) May I ask how much 36 times 8 is?

It is sometimes remarked that these uses are self-contradictory: they appear to ask for permission to perform an action, yet they perform that action in the same breath. (This is analogous, in non-linguistic cases, to asking, "May I see that dirty postcard" while snatching it,) Actually, we must remember that all these actions--asking, ordering, telling--are really dual in nature. They are not executed correctly unless the addressee does his part. If the speaker is declaring, he must believe; if asking, answer; if ordering, obey. What these uses are doing, then, is really saying, "If I do this part, will you do the other?" This is only necessary in nonfree goods cases, where the addressee retains the right to decide whether his participation in the conversational situation, as requested, is in order and all right with him. Of course, we also note that this kind of behavior, too, is generally conventional: it is not usually considered nice to reply "No" to these questions, and a simple "Sure" is felt to be flippant. One must either come up with the desired information or produce a good excuse, such as:

(30) a. Well, I just don't remember.
b. Er, oh, yeah.
c. I'll think about it.
d. I'm so tired....

Another problem that any speech-act theory must deal with is that, in certain closely-related pairs of sentences, one is politer than the other, for no apparent reason.

(31) a. You can take out the garbage.
b. Can you take out the garbage?

The difference between the two can be made clearer still: in an intentionally rude imperative, only the declarative form is usable. The question will seem to be self-contradictory--polite in form but rude in intention.

(32) a. You can take your methodology and shove it.
b. *Can you take your methodology and shove it?

It is interesting, though not at present explicable, that superpolite request forms are more acceptable than the merely-polite (32b). They are, of course, sarcastic, but certainly while (32b) should be equally capable of sarcastic intonation and interpretation, it isn't.

(33) Could you just possibly take your methodology and shove it?

It is not immediately clear why putting the sentence into the interrogative form can make such a difference in its interpretation. But it becomes clearer when we resort to our rules of politeness, and more particularly to *Rule 2*. (31a) tells the addressee, directly, that he is able to fulfill the request: he is left no "out" in this regard. Now, if one is assumed to be able to fulfill a request and one does not, one is being rude. Normally, the only polite way to refuse to accede to a request is to put forth a claim of inability, real or contrived. But here, the addressee is not even allowed to do that. If he refuses, he will have to be rude himself. The speaker of (31a) is forcing the addressee into an act of rudeness, itself an act of rudeness. He is doing this by violating *Rule 2*, denying the addressee his option of gracious refusal by plea of inability. (If the addressee does refuse, his refusal will be rude as a violation of *Rule*

3. He has put himself in a position superior to that of the original speaker, which probably serves him right, but is a violation nonetheless.) But if the request is couched as (31b), at least conventionally the speaker is merely asking about the addressee's ability, not imputing it to him. It is, in fact, a particularly polite kind of request in that it really puts the acceptable form of refusal into the speaker's mouth--the denial of ability. That is, it very nearly suggests, "If you don't do as I ask, I'll know it's because you were unable, not unwilling." *Rule 2* is nicely adhered to, and the imperative is polite.

But in sentences like those in (32), the question of ability, or even of the addressee's literal compliance, is not at issue. Even ruder is another type:

(34) You may give me a kiss.

This is doubly rude. First, because by suggesting that the addressee wanted to do the thing in the first place, it suggests that this is an offer he can't refuse--hence, a violation of *Rule 2*. Then, since the speaker is putting himself in the position of grantor-of-the-request, he is considering the addressee his inferior, a violation of *3*.

Rule 2 violations of both types (omission and commission) exist, and are thought of differently from violations of *Rule 1*. If *Rule 2* is not applied, where normally it ought to be, the speaker will be considered pushy, or abrupt (especially if a woman). If applied where it usually is not, the speaker will seem uncertain, meek, namby-pamby. Violations of *Rule 2* seem interpretable as character defects rather than poor upbringing or nastiness, as violations of *Rule 1* seem to be.

Finally, the third rule of politeness is the equality rule: act as though you and addressee were equal; don't pull rank. Again, this is often applied conventionally. It is effective only if the speaker is of superior or equal status to the addressee; otherwise, he cannot decide to enforce it. It seems to be the case in typical American society that this rule supersedes the others, where applicable. It is a rule of informality, the opposite of *Rule 1*; where it is possible to employ *Rule 3*, employment of *Rule 1* instead will seem stiff and unfriendly. In a *Rule 3* situation, speakers of those languages having such devices will use the informal form of *you* mutually; changing back to the formal will signal a breakdown of the relationship, anger, or hostility. In the same way, a *Rule 3* situation usually implies being on first-hand or nickname terms with someone, and switching back to title + last name indicates the same sort of breakdown. [For discussion of pronoun and naming politeness in various languages, cf. Brown and Gilman (1960), Brown and Ford (1964), and Friedrich (1972).] It is noted by Brown and Ford that in this sort of situation, people talk easily about a variety of intimate topics; the more chummy the term of address (say, nickname rather than first-name), the more apt people are to talk about what we might call nonfree goods topics. Among such topics are people's sex lives and their economic health.

Now we noted that in *Rule 1* situations people resorted to technical terms to avoid discussing embarrassing issues like sex bluntly; in *Rule 2* situations, we found euphemisms; and it is not surprising, given the other things true of *Rule 3* settings, that here we find neither, but just the simple terms themselves. Related to this is the fact that here we find simple imperatives: not (35a) or (35b), for instance, but (35c):

(35) a. Please take out the garbage.
b. Don't you think the garbage is beginning to smell?
c. Take out the garbage.

This sometimes puzzles people. Surely, if you feel friendly towards a person, you'd be expected to deal softly, that is, politely, with him? Surely courtesy goes along with friendship? Actually, not really. Notice that, if two people have been in a real *Rule 3* relationship and then suddenly one of them starts to issue requests of the form of (35a) or (35b), the normal reaction on the part of the other person will be that the other is angry--"What did I do wrong?" The idea seems to be that in this situation, one need not worry about imposing or taking over options. The real-world situation is such that neither will take advantage of the other. As soon as this delicate balance is felt to be broken, the conventions designed for one's protection in circumstances where this is necessary surface again. So we see that the conventional sorts of politeness are really devices to protect one member or the other of a pair from exploitation. The weaker is the one who has most to gain from polite gestures, but since these so often turn out to be empty or conventional, their value is questionable in a real-world sense. But *Rule 3* takes precedence where it can. When in doubt, at least in our society, we initiate *Rule 3*. Of course, if there really is an inequality in the positions of the two people involved, only the person of higher status can initiate *Rule 3*. He thereby says, "I'm raising you to my level"--a compliment, one the underlying is presumably glad to accept. But if the inferior should presume to initiate the relationship (he generally knows better than to do so) it would be like saying, "Come down to my level"--no compliment, and likely to be spurned, at least in an age less ostensibly democratic than this. For this reason professors think it pretty generous and democratic of themselves to call students by their first names. Students are often confused by this. They don't quite dare reciprocate (they feel they'd be status-climbing and might to rebuffed), but they feel even worse about calling *him* "Mr." or "Dr." or "Professor" and getting first-named in return. This is analogous to a *vous-tu* relationship in French, and rather demeaning.

We can also think of *Rule 3* as the rule governing informality; by informal, I mean here "outside of the rules." (In *Rule 3* situations, as we have seen and shall see, many conventional rules are suspended.) In *Rule 3* situations, too, we find many particles that aren't used so much for hesitancy, but rather to express a feeling of solidarity between speaker and addressee: *y'know, I mean, like*. Incidentally, future and present English teachers and rhetoricians should note that these particles, like those mentioned in conjunction with *Rule 2*, are by no means "meaningless:" they serve to delineate the relationship between speaker and addressee, between speaker and his material. They show the addressee how the speaker feels about him--as friend or mere acquaintance--and show how strongly he feels about what he's talking about. We must not make the mistake of consigning to the scrapheap any linguistic entity just because it does not bear dictionary, or denotative, meaning. Most of what we say isn't denotative, but said merely to show the other person what sort of relationship you're trying to establish with him.

Then let us return to the question I posed earlier: is there a relationship between the rules of politeness and the rules of conversation? I think there are several, although the exact forms of the relationships are obscure.

As has been mentioned, the rules of conversation have as a principal function the aim of the speaker to make himself clear. As long as the speaker follows them literally, his meaning and the purpose of his act of communication will be evident to the addressee. Of course, there always remains one great problem with the rules as formulated: my relevance is your irrelevance, my necessity is your triviality, and so on. That is, the rules as stated assume language exists and is used in a vacuum, or at any rate do not attempt to allow for differences in applicability according to

the situation. In a sense they are circular, or beg the question: in each conversational situation, speaker and addressee must somehow come to a common decision as to what shall be necessary, what shall be relevant, what shall be clear. Then, if the speaker stays within the guidelines as understood by himself and the addressee, there will be no trouble. This is, of course, a question of context-specific pragmatics. I do not suggest that the grammar must tailor the rules of conversation to every conceivable conversational situation, any more than the rules of grammar must specify, for instance, every possible situation in which *some* rather than *any*, or *any* rather than *some*, might be used. We aim for some generalizations as to when the rules of conversation are in force. But I do want the reader to realize that this is a real issue: the understanding of what is meant by conversational necessity, conversational relevance, and so on, appropriate to the situation, is crucial if we are to ever have rules of conversation that will have predictive value.

Supposing for now that these details are understood, it will be seen that the rules of conversation, ideally, function so as to produce maximally clear utterances. But then, they are but subcases of a more general principle of human conduct: be clear as to your motives in a transaction. If someone is purposely unclear, conversationally or behaviorally, we call him respectively a liar or a hypocrite. If the lack of clarity is accidental, he is merely fuzzy-minded in both cases. Of course, there is a third class of cases, where the speaker announces his intention of being unclear, as it were, and the addressee accepts the announcement, and nobody is indignant. But generally, if we are in a situation where we expect the rules of conversation to be in force, we will be annoyed if we feel they are being violated.

Annoyance is generally the reaction when rules of politeness are flouted, stronger emotions usually being reserved for cases where the violation is of something more serious than mere politeness. So I am annoyed if someone interrupts me *(Rule 1)*, or if he calls me by my first name without invitation *(Rule 3)*, or if he gives peremptory orders without being my superior *(Rule 2)*, or if he commits violations of any of these rules in the direction of omission. But I am not annoyed if he murders my mother or if he steals my car. Nor is it impolite to commit murder, or steal cars. The rules of politeness are effective only up to a certain point: when real danger of injury (physical, mental, or economic) looms, the rules of politeness are ineffectual. We have already noted cases where the rules of politeness differ between cultures: the British, for instance, are stereotyped by many red-blooded (as opposed to blue-blooded) Americans as overly insistent on *Rule 1* and unwilling to apply *Rule 3*, whether or not it is really true. It is but a small exaggeration for the American to suggest that the British not only apply rules of politeness to a greater extent than we do, but apply them where it is grossly inappropriate to do so. So we have jokes about the British remembering their rules of politeness as they are sinking on a ship, or caught *in flagrante*. But the point I wanted to make here was that our reaction to violations of the rules of conversation is rather similar to our reaction to violations of politeness rules in general: annoyance. "He has a nerve to take up my time with that shaggy-dog story," or "Why don't you get to the *point*, dammit," or "Why can't he say what he means?" Interrupting a participant in a discourse is felt to be much like going on and on about, apparently, nothing. Both mark you as a conversational menace, a boor or a bore, as the case may be.

In fact, we can look at the rules of conversation as subcases of rules of politeness. As noted, the rules of conversation are there to ensure clarity. Clarity in a conversational contribution means that the speaker will not be wasting the addressee's time. That is, he is not imposing on

the addressee; he is telling him only what he has a need and a desire to know. Imposition occurs when conversational contributions are unwanted or unneeded.

The rules of conversation as presently formulated apply only to declarative speech-acts, since the latter alone have as their major purpose the transmission of information. Yet we might want to be able to bring interrogative and imperative sentences under the same classificatory scheme if we wished to make the rules of conversation into a useful heuristic tool. For instance, just as we can talk about pragmatically ill-formed declaratives, we can construct ill-formed interrogatives and imperatives. We feel there are violations of speech-act rules going on in all these cases, but how can we reduce them to violations of the same sets of rules, namely, some version of the rules of conversation?

A declarative violates the rules when it gives too much, or too little, information or the information is beside the point or unusable because it is presented in an obfuscatory way. Now, just as a declarative dispenses information, a question seeks information. I have said that forcing the addressee to violate a rule of politeness, or conversation, itself constitutes a violation. Then we might look at an aberrant question as one that would force the addressee, if he were to attempt an answer, to violate one of the rules of conversation. Rhetorical questions are a possible case. (As long as they are signalled, we don't object, but sometimes rhetorical questions are inadequately signalled and therefore taken as true questions--and then we do get annoyed.) There are several types of rhetorical questions. In the first instance the speaker already knows the answer (so that the answer would violate quantity by being more than is needed). Classroom questions are of this type. Labov (1970) has discussed how the interpretation of such aberrant questions differs from dialect to dialect.

(36) When did Columbus discover America, Johnny?

In some cases, the speaker knows the addressee couldn't possibly know the answer (and would violate quantity again, because he couldn't possibly say as much as was required):

(37) Where the hell is Fred?

There are other types of aberrant questions. Violations of relevancy, for example, where the answer would be apparently irrelevent to the conversation:

(38) Sp 1: So then I went in to Nixon, and I said to him, Dick, I want to talk to you for a minute about your stand on our diplomatic relations with Serbia. And he says....
Sp 2: Have you seen Glenda recently?

To which Sp 1 may answer, with indignation, "What has that to do with anything" or "Huh," or something indicating that the conversation has taken, in his view, an irrelevant turn.

Or, of course, the question may violate manner. This is most obvious when the addressee couldn't understand the question itself, that is, doesn't perceive how he is to answer appropriately, so presumably his answer would be confusing if it were to exist.

(39) Have you spoken to whatsisname about the whaddyacallit?

We have been equating conversational acts with nonlinguistic acts, and

we can equate questions in this way with imperatives. While a declarative gives or provides something (namely, information), a question and an imperative both seek to get something. In this way both are distinct from declaratives. An interrogative seeks to gain information; an imperative, to get compliance, that is, something nonlinguistic or at least not necessarily linguistic, from the addressee. In this way, we can think of linguistic concepts of free goods as applying easily to both interrogatives (information that the speaker doesn't have a right to have access to) and imperatives (actions the speaker doesn't have a right to have access to). How can we talk about violations of the rules of conversation with respect to imperatives? The problem here is that no information is itself imparted directly by an imperative, as with a declarative, and none is sought, as with an interrogative. Yet an imperative can be ill-formed under the following conditions: (1) The addressee cannot obey (and the speaker knows it) and (2) the thing has been done already. Examples of these two types are:

(40) a. Yeah, just make me do it!
b. That's right, cry!

A third type of imperative violation consists of asking someone to do something you do not have the right to expect him to do. This is parallel to free goods violations in questions (asking a question which you do not have the right to expect information about) and in declaratives (giving information you do not have the right to dispense[3]). The first two linguistic cases are parallel to taking some material object without permission; the last, to offering something that was not asked for nor normally thought of as involving free goods, but in a sense it does, in that we are thus forcing someone to accept what he might not want. Giving information is parallel to complying with an order. So to be instructed to do something that one obviously cannot do is parallel to being asked to give an answer one cannot possibly know [like sentence (37)]. To be instructed to do something one is doing already is like being asked to give information that is known already [like (36)]. So if we think of the rules of conversation as, really, rules of transactions, we can think of question and declarative violations as violating specific principles: the declarative directly and the interrogative by forcing the addressee to commit a linguistic violation. And we can think of imperative violations as forcing aberrant non-linguistic behavior by linguistic means. The first type of aberrant imperative [as in sentence (40a)], is like a quantity violation in the direction of *less information than necessary*; the second, of *more*. We can also think of relevance and manner violations in the same way. (But it seems difficult to think of violations of quality for either questions or imperatives, since you cannot in the first case force someone to give a false answer merely by asking a question, and I cannot even think what a quality violation would be in terms of imperative sentences. After all, what is a false action? Could we in this case mean a wrong one, and speak of an imperative violation of quality as one that got someone to do something incorrectly?)

The reader should have been struck, while reading the foregoing passages, by a seeming difficulty: in the normal friendly conversation, we don't follow the rules of conversation. In fact, the easiest way to ensure a stiff, formal, or abysmally dull conversation is to abide by these rules. Then it would seem, if these rules were not followed, that conversation would inevitably bog down in its own illogic: a conversational contribution not made according to the rules would be impossible to understand and impossible to respond to appropriately. Yet we know this isn't so. We generally understand each other perfectly, though the conversation doesn't

abide by the rules at all. There are several questions raised by this situation. First, how do we relate these apparently aberrant contributions to a logical sequence of conversation? And then, why is it typical for conversations not to follow the rules? How is it that the friendlier a conversation, the less it will adhere to Grice's maxims?

Grice contributes at least a partial solution to the first puzzle. He hypothesizes a cooperative principle by which we make sense of what we hear. We assume, on hearing a contribution to a conversation, that it is intended to make sense and fit in with the general topic. If the contribution itself deviates from the form specified by the rules of conversation, the listener can relate it to some contribution that *would* follow these rules by using the notion of conversational implicature. Normally, the listener can figure out what the contribution implicates beyond its superficial meaning. Perhaps even more interestingly, he also can generally figure out *why* the speaker has made him go to the trouble of untangling the implicature, for certainly it would be unreasonable to make participants in a conversation go to special trouble to understand one another unless something were to be gained. Shortly we shall suggest what that something may be (as Grice does not).

We can give many examples of blatant violations of the rules:

- *Quality*: Glenda, you've never looked more beautiful.
- *Quantity*: You're thirty-two years old, Fred. [meaning, for example, "settle down, get out of graduate school, get a job." This sentence obviously violates quantity since Fred does not need this information as it stands; he presumably knows how old he is.]
- *Relevance*: What lovely weather we're having! [when said in the middle of a discussion about Mary Smith's sexual proclivities, as Mary looms into view.]
- *Manner*: ["What were Lucy and Bill doing in the Library?"] Well, they weren't discussing literature.

Larkin and O'Malley (1973) have discussed many cases like these as non-information-giving conversational sequences. It's true that they do go out of their way not to give information, or to conceal it, but they do communicate information somehow, and by the very fact that they communicate it indirectly, they further indicate to the addressee that the information is of a special kind, that the conversation is in a special class.

There seems, in fact, to be an overriding principle in all of this: "Be clear, unless there is some reason not to be." Then, if clarity is not achieved, the participants in the conversation will, by this metarule and their concept of implicature, both be able to figure out why the contribution was unclear, and what its translation is.

There are various overriding reasons that we can identify. First, literature is notorious for lack of clarity, poetry in particular, and often it seems that the more highly regarded the work, the harder the reader has to mediate between the printed word and its intention. The result is that each reader, since he has to some extent an individual grammar by which he interprets implicatures, receives his own message: a work of art is not the same work to all people. It is this process of mediation that makes reading good works of literature an exciting intellectual exercise, and also one of the things that distinguishes "creative" writing from scientific, technical, or academic prose, which attempts above all to be clear and unambiguous--and thereby sacrifices, perhaps necessarily, any esthetic pleasure it might possibly impart to its readers.

The language of certain kinds of schizophrenics also is notable for violating these conversational principles with greater-than-normal frequency. But the problem in understanding these very special conversational contributions is that most listeners are not operating under the same system of

rules that the speaker is: either the speaker has his own special rules or his own special directives governing the applicability of the usual rules. I don't know which is the case, or how you could tell. Now obviously it's probable that no two normal people have exactly the same rules as to when you use implicature, how you use it, and when the situation demands its use. Hence, people are always confusing and offending each other by being more indirect than expected, or more brusque than expected, in a given situation. But their contributions could be translated into what was expected by the addressee, and the indirect means that the speaker used were the ones that would be expected--not some really bizarre circumlocution. If a speaker errs too often in these ways, he may get the reputation of having various sorts of personality defects--being arrogant, shy, confusing, and so on--but he will probably not be considered out-and-out insane unless his contributions are really and consistently out of the ballpark.

Another type of situation where we are apt to resort to implicature to get our conversational contribution across is where we sense we are in possible danger if responsibility for the direct speech act can be ascribed to us. So if we feel we don't have the right to give orders or make requests, we might merely say, "Brr" where in another case one might say, "Close the goddamn window!" If the topic of conversation might be embarrassing, one might say it indirectly (consider the example of a manner implicature, above) to avoid being charged with grossness. Bureaucratic style, with its well-known turgidity (a form of manner violation) is famous for avoidance of responsibility for saying something. The result, of course, is that everyone interprets the directive as suits him, or not at all, and nothing is expected, which is the consummation devoutly to be wished by the dutiful bureaucrat.

And, related to this in ways we have discussed already, implicature is closely tied to politeness. When the speaker is afraid that what he has to communicate will involve nonfree goods of some kind, he is apt to resort to circumlocution, that is, the use of implicature. In fact, conversational implicature is a special case of *Politeness Rule 2*; at least conventionally, it gives the addressee leeway in interpreting what is said to him. He need not automatically realize that he has just been told THAT, whatever undesirable thing THAT may be. But strict adherence to the rules of conversation themselves is, if related to politeness at all, *Rule 1* related. Staying strictly to communicating real-world information--devoid of your judgements as to whether it is indelicate or otherwise troublesome--is a type of *Rule 1* behavior. It distances speaker and addressee from the content of the utterance, and thereby from each other.

When we look more closely at indirect speech acts, we notice interesting relationships among them. In particular, there is a hierarchy in which they may be used to replace direct utterances. Theoretically, an imperative could implicate either a declarative, a question, or another imperative, and similarly for the other two major speech act types. In actuality, there are many fewer possibilities, and these may be represented schematically by the following hierarchy:

question $\lessdot$ declarative $\lessdot$ imperative

This may be read as: a question may implicate a declarative or an imperative, a declarative may implicate an imperative or another declarative, but an imperative may implicate only another imperative, not a question or a declarative. In this sense, an imperative is the "strongest" of the three speech act types, a question the weakest. To give some examples:

(41) Where's the peanut butter? S[S is read as "conversationally

implicates"]

1. You've put the peanut butter someplace weird.
2. Give me the peanut butter (already).
3. Why isn't the peanut butter on the table?

(42) It's cold in here.

1. Close the window.
2. I'm uncomfortable.
3. *Where's my sweater? (where * denotes an impossible implicature.)

(43) Take out the garbage.

1. *It smells in here.
2. *What day does the garbage get collected?
3. Follow my orders.

This hierarchy is apparently based on how demeaning or difficult it is for the addressee to be *expected* to perform the work required on his part for the successful completion of the speech act. We have already remarked that the conditions guaranteeing success in all three speech act types are two-way: both speaker and addressee have a part to play.

To summarize here, a question requires a response (verbal), a declarative utterance requires the addressee's belief and an imperative requires the addressee's act of compliance.

A response is purely verbal, committing the addressee to nothing further. Moreover, in a questioning situation, the asker puts himself in a humble position with respect to the person he is asking: he needs the response from him; he is at his mercy. So in asking a question, the speaker acknowledges his subservience, which counteracts the amount of work that the addressee is expected to do. (Hence, too, a particularly telling form of sarcasm is a question which by virtue of the superior position of the questioner commits the addressee to provide a response that is embarrassing to him: "What the hell do you think you're doing with that?").

To require someone to *believe* what you're saying is inherently to ask less of him in terms of measurable intellectual or physical labor, but it is asking something more demeaning. To impart information that is expected to be believed, the speaker puts himself in a superior position to the addressee and is presumably giving him something he needs. Hence, a declarative is harder for an addressee to take than a question.

An imperative is the hardest of all, and hence the speech act type most often hedged, implicated, or otherwise got at indirectly. It is true that an imperative, like a question, puts the power to grant something into the addressee's hands: the speaker needs something from him. But the speaker also implies, with the direct imperative, that the addressee cannot refuse to comply. While giving information may put you in an intellectually superior position, which makes the question a relatively light constraint on the addressee, doing something at the behest of someone else indicates that you are somehow inferior to him. Thus, an imperative is the least polite and the most avoided of all the three speech act types, and hence cannot be used as an indirect means of conveying the others.

Supposing that we are thus going to violate the rules of conversation via implicature, it is considerate to so warn the addressee--to let him know that there is a reason for the apparent confusion. So we find that violations are often signaled. The following imaginary conversation is rife with examples of signaled violations:

(44) 1. Sp 1: Nice day, isn't it?
2. Sp 2: Yeah....*y'know*, it feels like spring.
3. Sp 1: Yes...*by the way*, do you still have my lawnmower?
4. Sp 2: *Obviously* your wife never told you my wife

gave it back.

5. Sp 1: Your wife and mine haven't had too much to say to each other lately, *if you know what I mean...*
6. Sp 2: *Oh yeah*, they're *real* pals.
7. Sp 1: *Say*, don't take any wooden nickles.
8. Sp 2: Right, be seein' ya.

Here in virtually every speech we find a violation of a rule of conversation, signalled by something in the utterance, whether lexical or merely intonational (which we cannot indicate). This is a fairly typical sort of conversation, I guess, if a bit suburban and tedious. We can also hazard a guess that the better the participants know each other, the more violations of the rules of conversation, signaled or not, will play a role in their encounters.

Let us look at (44) and see what the underlined portions contribute:

- Line 2: *Y'know* signals a violation of quantity, that is, what follows is, strictly speaking, more than the addressee needs to know, since he knows it already. The purpose of such a violation is to remind him which of the various things he knows is to be brought to the foreground of his thoughts--which of his voluminous general knowledge he needs to take part in the rest of this conversation.
- Line 3: *By the way* signals a violation of relevance. Again, strictly speaking, what follows is not related to what has preceded. The signal indicates that the topic is being changed, at least apparently, but that it is still related to the interests of the participants somehow.
- Line 4: *Obviously* is a violation of quantity again. (If it really were obvious, there'd be no need to say it at all.) The use of the word is a kind of apology for saying what Speaker 1 already knows, but leaves open the possibility that by chance he may not know it and this is really new information.
- Line 5: *If you know what I mean* signals a violation of manner. Usually interpreted to mean that what is about to be or has been said is too "delicate" (i.e. too near a free goods violation) to be said directly, that is, that there's a reason for obfuscation but obfuscation it is.
- Line 6: Here is a violation of quality, signalled largely by sarcastic intonation. To say the thing directly would be to belabor the obvious (violate quantity, right?), so Speaker 2 chooses to violate quality, signaling, instead.
- Line 7: *Say* again signals a violation of relevance, indicating a change of subject, in this case a polite form of leave-taking.

It should be evident, then, from the foregoing that the use of violations of the rules of conversation, particularly signaled violations, is a principal means of ensuring informality and keeping conversations going, as well as avoiding awkward moments when there is nothing to say (no information to communicate) or no graceful way to say it directly.

With these thoughts about signaling in mind, let us return to one of the problems we noted earlier--that the underlying performative verb could occur superficially in any of several forms: *(1) totally absent, the "unmarked" case; (2) present in its verbal form; and (3) softened, as a cogitative, and, presumably, softened and appearing in a related nonverbal form, as a hedge or a tag question.* In the third case we find, again, a violation of the rules of conversation in deference to a rule *(Rule 2)* of politeness: it leaves the addressee his options. A sentence containing one of these verbs violates the rule of quantity: it gives less information than, strictly speaking, the addressee needs to know the speaker's intention. Therefore, confusion sometimes ensues, as we have said, when the addressee doesn't know whether, in fact, the speaker really is giving all the infor-

mation he has at his disposal as clearly as he can, or whether his hesitation is conventional for purposes of politeness.

The first case is simply disposed of. Such a sentence violates no rules, makes no special assumptions. The simple cases with no verb of speaking explicitly present are generally all that is necessary for the addressee to understand what is conveyed by an act of speech.

This leaves us with the second case, of superficially-present performative verbs. We have already mentioned one such case, where it was necessary to use the performative in questions, where a free goods conflict might exist [cf., for example, (21) and (22)]. In those cases, it was the performative act itself that needed permission, so naturally it was necessary to mention it explicitly. But we have other noninterrogative cases:

(45) a. I'm telling you that Sweeney is a conscious dupe of the Communist conspiracy.
b. I'm telling you to vote for Sweeney.
c. I'm asking you why you voted for that idiot Sweeney.

Now one thing that is true of a sentence in which everything necessary to understand its meaning is present is that it's clearer than one in which this is not true--not as elegant, perhaps, but clearer. There is less possibility of misunderstanding. So if we were interested in applying the first of our rules of pragmatic competence--"be clear"--with the most force, sentences such as the ones in (45) would be prime candidates. At the same time, they are in violation of the rules of politeness, since they expressly close off the addressee's options, tell him how he is to think [(a)], what he is to do [(b)], and how he is to reply [(c)]. By implication, then, he is being ordered around peremptorily, and not being treated as an equal (violation of *Rule 3*) and being pressured as well (violation of *Rule 1*). A more persuasive case of politeness violation would be hard to find. This is in contradistinction to the sentences of type 1, which neither violate anything nor go out of their way to observe anything. But they seem fine for the purpose. Why bother with the second type, so potentially troublesome?

It is true that few duels, if any, have been fought over the presence of an explicit performative in a sentence. There is general understanding that, if one must resort to such a sharp way of saying a thing, there must be a reason for it. When there is danger that a lack of understanding exists, desperate measures are taken. Politeness is sacrificed for greater clarity. Now we have to ask where sentences such as those of (45) are used. They seem to be common only as last resort measures: that is, they're used when previous attempts to communicate the message appear to have failed. So (a) is used as a counterargument, when the speaker of that sentence has already said:

(46) Sweeney is a conscious dupe....

and his addressee has either ignored him or replied something unsatisfactory like:

(47) Sure, so's your old man.

Similarly, one uses an order like (45b) only when a previous order in simpler form has been countermanded or ignored. And, finally, (c) is appropriate if a previous question has gone unanswered. So these sentences seem to be used when clarity really is a serious issue--when there is doubt that the speech act was effective its first time round, in order to

insure that there should be no mistake the second time. In this kind of situation, it is generally recognized that desperate measures are appropriate, and that politeness may be violated in order to ensure clarity. But generally, one had better be pretty careful before assuming that violations of politeness will be tolerated. We may note that, though the rules of conversation are essentially principles of clarity, and utterances like those of (45) are performed for the sake of clarity, in some ways they may be looked at as violations of at least one rule, namely quantity, and perhaps manner (they are not fully succinct). But as with most of the rules of conversation, we must ask, "necessary for what," "succinct enough for what" and, thus put in context, we see that they are just necessary enough for the situations in which they are used, and just succinct enough, too. This is one example of the problem alluded to earlier, of defining the terms used in stating the rules of conversation so that they could encompass all the necessary types of conceivable pragmatic situations.[4]

I have tried in the course of this paper to approach a puzzling question: where several ways of saying approximately the same thing exist, and some are more complex or less clear than others, why do they exist? And why, when several ways of saying something exist, is the usability of each confined to a particular range of contexts? I have shown that politeness is often a decisive factor, as well as a very complex one, and, therefore, that sociology must go hand in hand with linguistics if we are to explain many aspects of language use.

And I might suggest in conclusion the existence of fuzzy pragmatic rules to go along with our fuzzy syntax and fuzzy semantics (G. Lakoff 1972). We see that the rules of pragmatic competence, along with the rules of politeness and the rules of conversation, are applicable to different degrees in different contexts, and thus they all interact with one another in many and varied ways. Moreover, the distinction between real and conventional politeness, hesitancy, camaraderie, and so on occurs in degrees rather than precise steps. And we have also seen there are dialectal differences in the rules of politeness: their form, their range of applicability, their preferential ordering with respect to each other and to the rules of conversation, as well as judgements about the various environments in which the rules might be applied. So we see that linguistics is broader than it was yesterday, narrower than it will be tomorrow.

As, indeed, who of us is not?

FOOTNOTES

[1] For discussion of the syntax, semantics, and pragmatics of tags, cf. Cattell (1973), Jackendoff (1971), and R. Lakoff (1969), none of whose positions the present author necessarily endorses.

[2] Particularly as discussed in Goffman (1967).

[3] I can think of two types of examples: (1) telling the addressee something that will hurt him and (2) telling the addressee something he should not know.

[4] For much insightful discussion of the uses of and problems with explicit performative verbs, cf. Davison (1973)

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Pragmatics in Natural Logic[1]

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I would like to discuss two aspects of pragmatics that in recent years have been treated very differently: indexicals and conversational implicatures. Montague and Scott proposed to handle indexicals by adding to points of reference (sometimes called 'indices') extra coordinates for speaker, hearer, time and place utterance. This proposal places indexicals among those phenomena to be dealt with by formal logic, and such systems have in recent years been articulated by Lewis and Kamp, among others. Implicatures, on the other hand, were taken by Grice to be by nature informal inferences of a fundamentally different kind than logical inferences, and hence not to be dealt with by the apparatus of formal logic. In other papers I have dropped hints to the effect that indexicals and implicatures should be treated somewhat differently than they are in the Montague-Scott and Grice proposals. I would like to elaborate a bit on those hints.

The basic suggestion is this:

(1) If the goals of what I have called natural logic are adopted, then it should in time be possible to handle indexicals without any extra coordinates for speaker, hearer, and time and place of utterance, and it should also be possible to handle implicatures without any kinds of extralogical inference.

The basic ingredients of the suggestion are as follows:

(A) The so-called performative analysis for imperatives, questions, statements, promises, etc.
(B) The limitation of points of reference to assignment coordinates for variables and atomic predicates.
(C) The commitment of natural logic to the formal semantic characterization of *all* natural language concepts, including those having to do with social interaction, such as sincerity, politeness, formality, cooperation, etc.
(D) Global, transderivational, fuzzy correspondence grammars.

Let us start with what has been called the *performative analysis*--which is not a single proposal, but a family of various partial proposals made by grammarians like Sanctius, Lancelot, and Whitney, and more recently by Postal, Robin Lakoff, Ross, Sadock, J. McCawley, and myself, among others. The positions held by these people vary a great deal, and it is not my purpose to try to survey them here. What they have in common is that they would analyse imperative sentences like *Leave* as having logical structures con-

taining a performative imperative predicate with arguments referring to speaker and hearer, essentially the same logical structure as that needed for the (surface) sentence *I order you to leave*, which contains a surface performative predicate *(order)* and surface arguments referring to speaker and hearer (*I* and *you*). In support of such an analysis, a large amount of syntactic evidence has been offered; it is my opinion that there is enough correct evidence of this sort to strongly support such a proposal for imperatives. Ross has, in addition, observed that syntactic evidence of the same sort in nearly the same amount is available to support a parallel performative analysis for declaratives. Thus, a declarative sentence like *There exist unicorns*, which contains a surface performative declarative predicate *(state)* and surface arguments referring to speaker and hearer (*I* and *you*). Whereas most of the evidence to date for these proposals has been syntactic in nature, I would like to provide some evidence in favour of them of a semantic-pragmatic nature.

Let us first consider two proposals for providing formal semantics for performative sentences, one made by David Lewis (1972) and one made by myself (1972a). Lewis adopts the Montague-Scott proposal for the use of *indices* (Montague's term) or *points of reference* (Scott's term) to account for indexicals in the framework of general intentional logic as outlined by Montague.

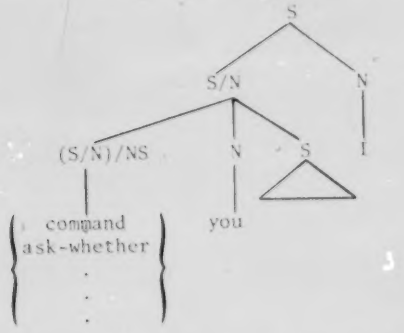
> We may take indices as *n*-tuples (finite sequences) of the various items other than meaning that may enter into determining extensions. We call these various items *coordinates* of the index, and we shall assume that the coordinates are given some arbitrary fixed order.
>
> First, we must have a *possible-world coordinate*. Contingent sentences depend for their truth value on facts about the world, and so are true at some possible worlds and false at others. A possible world corresponds to a possible totality of facts, determinate in all respects. Common nouns also have different extensions at different possible worlds; and so do some names, at least if we adopt the position (defended in Lewis, 1968a) that things are related to their counterparts in other worlds by ties of strong similarity rather than identity.
>
> Second, we must have several *contextual coordinates* corresponding to familiar sorts of dependence on features of context. (The world coordinate itself might be regarded as a feature of context, since different possible utterances of a sentence are located in different possible worlds.) We must have a *time coordinate*, in view of tensed sentences and such sentences as 'Today is Tuesday'; a *place coordinate*, in view of such sentences as 'Here there are tigers'; a *speaker coordinate* in view of such sentences as 'I am Porky'; an *audience coordinate* in view of such sentences as 'You are Porky'; an *indicated-objects coordinate* in view of such sentences as 'That pig is Porky' or 'Those men are communists'; and a *previous discourse coordinate* in view of such sentences as 'The afore-mentioned pig is Porky'.
>
> Third, it is convenient to have an *assignment coordinate*: an infinite sequence of things, regarded as giving the values of any variables that may occur free in such expressions as '*x* is tall' or 'son of *y*'. Each variable employed in the language will accordingly be a name having as its intension, for some number *n*, the *nth variable intension*: that function whose value, at any index *i*, is that thing which is the *n*th term of the assignment coordinate of *i*. That thing is the extension, or value, of the variable at *i*. (Note that because there is more than one possible thing, the variable inten-

sions are distinct: nothing is both the n_1th and the n_2th variable intension for two different numbers n_1 and n_2.) The extensions of '*x* is tall' and of 'son of *y*' depend on the assignment and world coordinates of indices just as the extensions of 'I am tall' and 'son of mine' depend on the speaker and world coordinates. Yet the assignment coordinate cannot naturally be included among features of context. One might claim that variables do not appear in sentences of natural languages; but even if this is so, it may be useful to employ variables in a categorial base. In any case, I seek sufficient generality to accommodate languages that do employ variables.

...Thus an *index* is tentatively any octuple of which the first coordinate is a possible world, the second coordinate is a moment of time, the third coordinate is a place, the fourth coordinate is a person (or other creature capable of being a speaker), the fifth coordinate is a set of persons (or other creatures capable of being an audience), the sixth coordinate is a set (possibly empty) of concrete things capable of being pointed at, the seventh coordinate is a segment of discourse, and the eighth coordinate is an infinite sequence of things [Lewis (1972:175-6)].

Later, Lewis gives his account of the semantics of nondeclarative sentences, after rejecting a proposal by Stenius:

I prefer an alternative method of treating non-declaratives that requires no revision whatever in my system of categories, intensions, and meanings. Let us once again regard S as the category *sentence*, without discrimination of mood. But let us pay special attention to those sentential meanings that are represented by base structures of roughly the following form.



Such meanings can be represented by *performative sentences* such as these.

I command you to be late.
I ask you whether you are late.

(See Austin, 1962, for the standard account of performatives; but, as will be seen, I reject part of this account.) Such meanings might also be represented, after a more elaborate transformational derivation, by non-declaratives.

Be late!
Are you late?

I propose that these non-declaratives ought to be treated as paraphrases of the corresponding performatives, having the same base structure, meaning, intension, and truth-value at an index or on an occasion. And I propose that there is no difference in kind between the meanings of these performatives and non-declaratives and the meanings of the ordinary declarative sentences considered previously.

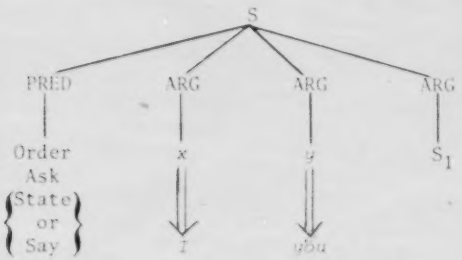
Lewis, however, refrains from going all the way with the performative analysis; in particular, he refuses to embrace a similar analysis for declaratives.

> If someone says 'I declare that the Earth is flat' (sincerely, not play-acting, etc.), I claim that he has spoken truly: he does indeed so declare. I claim this not only for the sake of my theory but as a point of common sense. Yet one might be tempted to say that he has spoken falsely, because the sentence embedded in his performative--the content of his declaration, the belief he avows--is false. Hence I do not propose to take ordinary declaratives as paraphrased performatives (as proposed in Ross, 1970) because that would get their truth conditions wrong [Lewis (1972: 210)].

The analysis Lewis adopts for non-declarative performatives resembles, in its essential parts, the proposal I made (1972a,b) for all performatives, including declaratives:

> ...it is claimed that the logical forms of imperatives, questions, and statements should be represented as in (A).

(A)



In (A), S_1 represents the propositional content of the command, question, or statement. Note that in statements it is the propositional content, not the entire sentence, that will be true or false. For example, if I say to you 'I state that I am innocent', and you reply 'That's false', you are denying that I am innocent, not that I made the statement. That is, in sentences where there is an overt performative verb of saying or stating or asserting, the propositional content, which is true or false, is not given by the sentence as a whole, but rather by the object of that performative verb. In 'I state that I am innocent', the direct object contains the embedded sentence 'I am innocent', which is the propositional content. Thus,

even in statements, it should not be surprising that the illocutionary force of the statement is to be represented in logical form by the presence of a performative verb.

In the analysis sketched in (A), the subject and indirect object of the performative verbs are represented in logical form by the indexical expressions *x* and *y*. Rules of grammar will mark the subject of the performative verb as being first person and the indirect object as being second person. Thus, logical forms need not contain any indication of first person or second person, as distinct from third person. If there are other instances of the indexical expressions *x* and *y* in S_1, they will be marked as being first and second person respectively by the grammatical rule of person-agreement, which makes a NP agree in person with its antecedent. Thus all occurrences of first or second person pronouns will be either the subject or indirect object of a performative verb or will arise through the rule of person-agreement. The analysis given in (A) and the corresponding account of first and second person pronouns makes certain predictions. Since the structure given in (A) is exactly the same structure that one finds in the case of non-performative verbs of ordering, asking, and saying, it is predicted that rules of grammar involving ordinary verbs of these classes, which occur overtly in English sentences, may generalize to the cases of performative verbs, even when those verbs are not overtly present in the surface form of the sentence, as in simple orders, questions, and statements [G. Lakoff (1972a: 560-1)].

The analysis of (A) not only permits the statement of grammatical generalizations, but it also permits one to simplify formal semantics. Consider, for example, the notion of an 'index' as given by Scott (1969). Scott assumed that indices would include among their coordinates specifications of the speaker, addressee, place, and time of the utterance, so that truth conditions could be stated for sentences such as 'Bring what *you now* have to *me* over *here*'. Under an analysis such as (A), the speaker and addressee coordinates could be eliminated from Scott's indices. Moreover, if (A) were expanded, as it should be, to include indications of the place and time of the utterance, then the place and time coordinates could be eliminated from Scott's indices.[3] Truth conditions for such sentences could then be reduced to truth conditions for sentences with ordinary adverbs of place and time. Moreover, truth conditions for sentences such as 'I am innocent' and 'I state that I am innocent' could be generalized in terms of the notion 'propositional content', namely, S_1 in (A). Thus, (A) can be motivated from a logical as well as a grammatical point of view [G. Lakoff (1972a: 569)].

I saw Lewis' paper after writing the above, but before receiving the proofs, and added footnote 9 at the last minute:

[3] This becomes clearer if one considers Lewis' treatment in *General Semantics* rather than Scott's. Lewis distinguishes between 'contextual coordinates' and an 'assignment coordinate'. The contextual coordinates are for such things as speaker, audience, time of utterance, and place of utterance. The assignment coordinate gives 'the values of any variables that may

> occur free in such expressions as "*x* is tall" or "son of *y*"'.
>
> The assignment coordinate will have to assign a value corresponding to the speaker for person variables, since the speaker would presumably be in the worlds in question. The same for the audience. If times are assigned to time variables by the assignment coordinate, presumably the time of the utterance will be included. And if places are assigned to place variables, one would assume that the place of the utterance would be given by the assignment coordinate. Given this, and the analysis given in (A), the contextual coordinates become superfluous, since the job that they would do in Lewis' system would be done automatically by the assignment coordinate together with the analysis in (A). Since (A) involves no new types of structure--the same predicates occur in nonperformative uses and have to be given anyway--we have a considerable gain. What we have done is to largely, if not entirely, eliminate pragmatics, reducing it to garden variety semantics [G. Lakoff (1972a: 655)].

The principal place where Lewis and I differ is on the analysis of declaratives. My feeling is that the reason he gives for rejecting the performative analysis for declaratives is a bad one. According to Lewis, if a speaker uttered (1)

(1) I state that the earth is flat

and someone replied

(2) a. That's true
or
b. That statement is true

then, Lewis claims, the speaker of (2a) or (2b) would not be committing himself to the earth's being flat but only the first speaker's having said so. Lewis is simply wrong--natural language does not work that way. The speaker of (2a) or (2b) *is* committing himself to the earth's being flat.

Lewis' proposal is reminiscent of the classic story (probably fabricated) of the Pittsburgh judge who was caught taking bribes. When called before a grand jury, the judge took the stand under oath and said 'I swear that I have never taken a bribe'. The district attorney then brought the judge to trial for perjury, and produced witnesses to the effect that a bribe had taken place. The judge's defense was that he had not committed perjury at all, since all he said was 'I swear that I have never taken a bribe', and he had indeed sworn that he had never taken a bribe. The case was thereupon dismissed by the trial judge, who happened to be an old friend of the defendant judge. On Lewis' account, justice was served in this case. On my account, it was not.

Part of the confusion in Lewis' discussion arises because the English surface adjective *true* has certain conditions for appropriate use for just about all English speakers, with the exception of those logicians and philosophers who have made that surface adjective into a technical term. When Austin said that a performative sentence was neither 'true' nor 'false', and 'false' in their ordinary senses. A statement is something stated or at least statable, that is, that can be the direct object of a predicate of least statable, that is, that can be the direct object of a predicate of stating. It should be added that the normal English surface adjectives *true* and *false* are also limited by an additional condition on their appro-

priate use, namely, that any statement that they are predicated of must have previously been asserted or at least entertained. Consider sentences like:

(3) a. It is true that it is raining outside
b. It is false that it is raining outside

One could not just go up to someone out of the blue and appropriately say such sentences. The question has to have previously come up as to whether it is raining. Though (4a and b) will be true and false together in all situations in which they are both appropriate, they are appropriate in very different classes of situations.

(4) a. It is raining outside
b. It is true that it is raining outside

Since logicians rarely if ever consider conditions for appropriate use, and since performatives were never discussed in classical logic, the surface adjective *true* has come to be used as a technical term by many logicians. Within the tradition of formal semantics, *true* has been made into the relative term *true in a model (given a point of reference)*, which is equated with the technical term *satisfied in a model (given a point of reference)*. If I understand Lewis correctly, he is using the surface adjective *true* in this sense. Consider Lewis' claim (Lewis 1972: 210):

(5) 'I would wish to say that "I bet you sixpence it will rain tomorrow" is true on an occasion of an utterance if the utterer does bet his audience sixpence that it will rain on the following day; and, if the occasion is normal in certain respects, the utterer does so bet; therefore his utterance is true'

This statement does not make much sense if one takes the surface adjective *true* in its ordinary sense. Imagine the following discourses.

(6) a. I bet you sixpence it will rain tomorrow
b. That's false, because you don't have a penny to your name. You didn't just make a bet
b'. That's true--you did just bet me sixpence
(7) a. I hereby christen this battleship the *S.S. Borman*
b. That's false, you have no authority to give a name to that ship!
b'. That's true--you did just give that name to that ship
(8) a. I hereby pronounce you husband and wife
b. That's false, you have no authority to marry those people!
b'. That's true, he did just marry them

The (b) and (b') sentences are all inappropriate responses; Austin was right that the surface adjectives *false* and *true* cannot be appropriately predicated of performatives. For this reason, Lewis' statement in (5) may not match the intuitions of most speakers of English, including many ordinary language philosophers and linguists. However, it makes perfectly good sense if *true* in (5) is taken to mean *satisfied in a model (given a point of reference)*. 'Truth conditions' in Lewis' sense are meant to be satisfaction conditions, not conditions under which one can appropriately use the surface adjective *true*.

This shows up pretty clearly in the proposal I made in 'Performative antinomies':

What we need to do is to extend the assignment of truth values for

> nonperformative sentences to the assignment of felicity values for performative sentences. Just as we have valuations like $V_w|P| = 1$ for '*P* is true in world *w*', where *P* is nonperformative, we will let $V_w|P| = 1$ stand for '*P* is felicitous in world *w*', where *P* is performative [G. Lakoff (1972b: 570)].

There I use the neutral '1' to indicate satisfaction, both in the case of performatives and nonperformatives. When I speak of felicity values, I do not mean to suggest, incidentally, that there is a new kind of value called a *felicity value*, but rather that there is only one kind of value, a satisfaction value, and that the surface adjectives *felicitous* and *true* are to be taken as indicating satisfaction in the case of performatives and nonperformatives respectively. This is also what I had in mind (1971: 335-6) when I pointed out that the presuppositions of performative verbs in their nonperformative uses were identical to certain of the felicity conditions for those verbs in their performative uses.

An important point to bear in mind with respect to both Lewis' discussion and mine is that if so-called 'truth conditions' are satisfaction conditions in the model-theoretical sense, then in both Lewis' proposal and mine they are meant to apply to logical structures, *not to surface structures*. In both systems it is nonsense to think of a surface sentence being satisfied in a model at a point of reference, since satisfaction conditions are given only for logical structures, not for surface strings. Under the performative analysis for declaratives, all of the satisfaction conditions will come out to be correct, and the use of the surface adjective *true* in ordinary English will be accounted for (see appendix I).

(9)

(10) a. I state to you that unicorns exist
b. Unicorns exist

Both the sentences in (10a and b) will have (9) as their approximate logical structures. The satisfaction conditions for the statement to be made will be those for S_0. The satisfaction conditions for the content of the statement to be true will be those for S_1. The surface adjective *true* will be predicated of what is stated, i.e., the object of the verb of stating, namely, S_1. That is why someone who replies to (10a) by saying *That's true* or *That statement is true* will be committing himself to the truth of S_1 in (9).

Let us review the essential points of the two proposals:

(11)	LEWIS' PROPOSAL	MY PROPOSAL
	a. Satisfaction in a model is de-	Satisfaction in a model is defin-

	fined for all performatives except for the implicit declarative performative.	ed for all performatives including the implicit declarative performative.
b.	Performative predicates have the same satisfaction conditions as nonperformative predicates.	Performative predicates have the same satisfaction conditions as nonperformative predicates.
c.	Logical structures contain pronouns *I, you, here, now,* etc.	Pronouns *I, you, here, now,* etc. are not in logical structure, but are 'introduced' by rules of grammar as replacements for variables.
d.	Transformational grammars are assumed.	Global transderivational correspondence grammars are assumed.
e.	Logical structures are not universal (at least because they contain English pronouns *I, you,* etc.)	Logical structures are taken to be universal.
f.	Index = $\{w,s,h,t,p,d,a\}$[2]	Index = {*a*, partial assignments to predicates}
g.	Meaning is given completely by model-theoretical interpretations of logical structures.	Only literal meaning is given by model-theoretical interpretations of logical structures. Conveyed meaning is given by model-theoretical interpretations of logical structures of sentences in given contexts. Not all literal meanings are conveyed.

It should be noted that the adoption of the performative analysis for implicit declaratives allows one to avoid having pronouns like *I, you, here,* and *now* in logical structure, and hence allows one to get rid of pragmatic coordinates for speaker, hearer, time and place of utterance. But what is more important, defining satisfaction in a model for *all* performatives as I propose allows one to define entailment for all performative cases in the same way as entailment is defined for all nonperformative cases, namely:

(12) $X \cup \{P\}$ entails Q (where P and Q are logical structures and X is a finite set of logical structures) if and only if Q is satisfied in all models at all points of reference at which X and P are satisfied.

If one can give for performatives the same account of satisfaction and entailment as one gives for nonperformatives, the following possibilities open up:

(13) a. One may not need separate theories for speech acts and for descriptions of speech acts. For example, the satisfaction conditions for the predicate *promise* in *I promise to marry you and I promised to marry you* can be the same.
b. It is conceivable that conversational implicatures may turn out to be logical entailments of performative utterances in certain contexts.
c. It should be possible to give a uniform characterization of performative antinomies.
d. Indirectly conveyed meanings for embedded sentences can be treated in exactly the same way as indirectly conveyed meanings for performatives.

Let me begin with indirectly conveyed meanings. Gordon and I (1971)[3] included the following in our proposal for what we called conversational postulates:

(14) *sincere (x,state(x,y,P))⊃believe(x,P)* ['if x is sincere in stating *P* to *y*, then *x* believes *P*']

At the time, we assumed that this and the other postulates we proposed were to be added specially to handle what Heringer has called 'indirect illocutionary force', that is, indirectly conveyed meanings in the case of performatives. I now think that we were wrong to segregate them off in that way. I would now consider (14) to be a normal part of natural logic, that is, a meaning postulate relating the meanings of *sincere, state,* and *believe.* (14) is one of the things that you know if you know the meanings of *sincere, state,* and *believe.* Logicians have sometimes worried about giving satisfaction conditions for *believe*, but to my knowledge, none has ever tried to give them for *state* and *sincere*. But if one were to accept the goals of natural logic, one would have to provide satisfaction conditions for all natural language concepts, including these. In an adequate natural logic, (14) would have to be satisfied in all models at all points of reference.

(15) a. Spiro was sincere in stating that Tricky Dick had betrayed him
b. Spiro believed that Tricky Dick had betrayed him

If (14) is taken to be a meaning postulate of natural logic, and if (12) is taken to define semantic entailment, then (15a) semantically entails (15b). Now consider (16).

(16) a. Sam was being sincere
b. Sam stated that Tricky Dick had betrayed him
c. Sam believed that Tricky Dick had betrayed him

Letting (16a) be *X* and (16b) be *P* in the definition of (12), then (16b), taken in a context where (16a) is assumed to be true, will semantically entail (16c), given (14) as a meaning postulate. Moreover, (17') will be a contradiction, given (14) and (17) as meaning postulates and an assumption of rationality.

(17) *believe(a,believe(a,S)) ⊃ believe(a,S)*

Note that (17) will suffice here and that it is not necessary to assume its converse, which is probably false.[4]

(17') Sam was sincere in stating that Tricky Dick had betrayed him but that he believed that Tricky Dick had not betrayed him

If (14) is true at all points of reference in all models, then (17') cannot be true in any model at any point of reference. For the same reason, (18a) will entail (18b) in a natural logic.

(18) a. Sam stated that Tricky Dick had betrayed him but that he did not believe that Tricky Dick had betrayed him
b. Sam was not being sincere

Given the performative analysis for declaratives, the definition of entailment in (12), and the independently motivated meaning postulates of (14),

(17), and (i) and (ii) in fn. 4, Moore's paradox can be accounted for automatically.

(19) a. Tricky Dick betrayed me, but I don't believe Tricky Dick betrayed me
b. The speaker is not being sincere (assuming that he does not hold contradictory beliefs)

(19a) can never be said sincerely and rationally, and that is accounted for given (12), (14), (17), and (i) and (ii) in fn. 4, together with the performative analysis for declaratives. Moreover, if we adopt the postulates in (20) that Gordon and I proposed, we can give similar accounts of the oddness of the sentences in (21).

(20) a. $sincere(x, promise(x,y,P)) \supset intend(x,P)$
b. $sincere(x,request(x,y,P)) \supset want(x,P)$
c. $sincere(x,request(x,y,tell(y,x,P)) \supset want(x,tell(x,P))$
(21) a. I promise to marry you, but I don't intend to
b. Please close the window, but I don't want you to
c. Who left, but don't tell me

None of these can ever be used sincerely and rationally.

What is interesting about such cases is that supposedly pragmatic paradoxes can be accounted for with just the apparatus of formal semantics, provided we adopt the performative analysis for all cases and the given meaning postulates, which are required independently for an adequate account of truth conditions in nonperformative cases.

There is another class of supposedly pragmatic paradoxes that can be handled by purely semantic means provided that we adopt a uniform performative analysis with definitions of satisfaction and entailment that hold for both performative and nonperformative predicates. These are what I have called the 'performative antinomies', cases like:

(22) a. Don't obey this order
b. I promise not to keep this promise
c. I advise you not to follow this advice
etc.

An account of these was given in G. Lakoff (1972b), where the principles in (23) were proposed.

(23) a. An order is felicitous only if it is (logically) possible for it to be obeyed.
b. A promise is felicitous only if it is (logically) possible for it to be kept.
c. A piece of advice is felicitous only if it is (logically) possible for it to be followed.

It is assumed that an order is felicitous if and only if the logical structure representing it has a satisfaction value of 1.

Given (23) and the usual satisfaction condition for '$\Diamond P$', namely (24), we can account for the performative antinomies of (22).

(24) $V_w[\Diamond P] = 1$ if $(\exists w')$ $(Rww' \ \& \ V_{w'}[P] = 1)$
where w and w' are possible situations

Take (22a). The order in (22a) can be obeyed if and only if it is not

obeyed. If *P = you do not obey this order*, then there will be no possible situation in which *P* is true, since in every possible situation in which *P* is true it is also false. Hence, there is no situation in which the value of '◇*P*' can equal 1. Consequently, (22) can never be a felicitous order.

What we have done in the case of (22a) is to account for what appears to be a pragmatic paradox by using only the devices of formal semantics, taken together with the performative analysis for imperatives and the principles of (23). Similar accounts can be given for (22b) and (22c).

Although declarative antinomies were not discussed in G. Lakoff (1972b), it turns out that they exist and can be handled in the same way. The declarative antinomy can be given by any of the following sentences:

(25) a. You do not believe this statement
b. I state that you do not believe this statement
c. You believe that this statement is false
d. I state that you believe that this statement is false

Each of the sentences of (25) has the following property: It is true if and only if you believe it is false, and it is false if and only if you believe it is true. Hence you cannot have a correct belief about it.

Given the performative analysis for declaratives, we can account for all the declarative antinomies in exactly the same way as we accounted for the nondeclarative antinomies, provided we add the principle:

(23) d. A statement is felicitous only if it is (logically) possible for it to be believed.

As before there will be no possible situation in which '◇*believe(y,P)*' will be satisfied, since *y* can believe *P* if and only if *y* does not believe *P*. Thus, '◇*believe(y,P)*' will always be false and so each of the statements in (25) will always be infelicitous.

Note, incidentally, that the principles of (23) are needed independently to account for natural logic entailments in nonperformative cases:

(26) a. Sam ordered Olga not to obey the order he was then giving
b. Sam did not give a felicitous order
(27) a. Sam stated to Olga that she did not believe the statement he was then making
b. Sam did not make a felicitous statement

The principles in (23) are needed to account for the inferences from the (a) to the (b) sentences above.

What we have shown so far is that, in the case of performative antinomies as in the case of the Moore paradoxes, the principles needed to account for natural language entailments in nonperformative cases will, given a uniform performative analysis, automatically give an account of what goes wrong in performative antinomies. This is no mean accomplishment. For what appeared to be paradoxes of a pragmatic nature can be accounted for by the use of independently needed formal semantic apparatus, given a uniform syntactic performative analysis for declaratives as well as for imperatives, promises, etc. Even if there were no purely syntactic evidence for a performative analysis, these results suggest that we would want to have one anyway--just so that the Moore paradoxes and performative antinomies could be accounted for by independently needed apparatus in formal semantics. It is especially interesting that purely syntactic evidence buttresses this result from the area of model-theoretical semantics. And it is striking that the same types of arguments obtain in both cases.

(28) THE FORM OF SYNTACTIC ARGUMENTS FOR PERFORMATIVE ANALYSES
  (i) We need certain rules to account for given syntactic phenomena in nonperformative sentences.
  (ii) Given the performative analysis, the same rules will automatically account for the corresponding syntactic phenomena in performative sentences for which additional and different rules would be needed if we do not adopt a performative analysis.

(29) THE FORM OF SEMANTIC-PRAGMATIC ARGUMENTS FOR THE PERFORMATIVE ANALYSIS
  (i) We need certain apparatus in natural logic to account for certain semantic facts in nonperformative sentences. (The apparatus includes definitions of satisfaction for certain classes of predicates, meaning postulates, and a definition of entailment.)
  (ii) Given the performative analysis, the same apparatus will automatically account for the corresponding 'pragmatic' facts in the case of performative sentences; while additional and different apparatus would be needed if we do not adopt a performative analysis.

The convergence of the syntactic evidence for the performative analysis with the semantic-pragmatic evidence seems to me to strongly confirm the need for some version of the performative analysis (though not necessarily any of the particular ones proposed by Sanctius, Lancelot, Whitney, Postal, R. Lakoff, Ross, or Sadock).

I suggested above that the performative analysis should enable us to frame the theory of speech acts within formal semantics. Actually, the idea for doing this is implicit in the approach to the theory of speech acts given in chapter 3 of Searle (1969), where Searle gives truth conditions for third-person descriptions of speech acts and lets them *be* the felicity conditions for those acts. Similarly, in a natural logic, satisfaction conditions would be given for each atomic predicate, including all of the performative predicates; the satisfaction conditions are at once both truth conditions and felicity conditions. The sincerity conditions given in (14) and (20) are examples of meaning postulates that function as conditions on satisfaction. Searle's *essential conditions* might take the form of meaning postulates like that in (30).

(30) $Request(x,y,P) \supset attempt(x,cause(x,P))$

(30) expresses Searle's essential condition for requests, which is that a request counts as an attempt on the part of the speaker to get the hearer to do the action requested. The need for (30) as a meaning postulate independently of performative sentences can be seen in (31).

(31) a. Henry requested of Jill that she take her clothes off
  b. Henry attempted to get Jill to take her clothes off

It should follow from the meaning of *request* that if (31a) is true then (31b) is true. Thus the meaning postulate in (30) is needed to account for entailments in nonperformative sentences.

Searle's preparatory conditions are especially interesting, since at least some of them are presuppositional in nature. For example, consider the condition on orders that says that the speaker has authority over the hearer. An inspection of nonperformative sentences shows that this is a presupposition, not merely an entailment.

(32) a. Sam ordered Harry to get out of the bar
b. Sam didn't order Harry to get out of the bar
c. Sam may order Harry to get out of the bar

Each of the sentences in (32) entails that Sam has authority over Harry.

Given a uniform performative analysis, there are only two ingredients required for a theory of speech acts: (i) an account of satisfaction conditions for all performative predicates; and (ii) an account of culture-specific assumptions about social interaction, at least in so far as they pertain to conversational interaction. We have discussed (i) at length; it is needed independently to account for nonperformative uses of performative predicates and requires only the apparatus of formal semantics. What about (ii)--the culture-specific assumptions? What Searle had in mind for these were such assumptions as (33):

(33) In normal conversations, you assume that the person you are talking to is being sincere, unless you have a good reason for not assuming it.

Thus, in an example like (16) above, (16a) ('Sam was being sincere') would be taken to be part of the culture-specific assumptions of speaker and hearer in a normal conversation. There is some doubt in my mind as to whether (33) is really a *culture-specific* assumption, rather than a truth which follows from the meaning of the concepts 'normal' and 'conversation'. The latter seems to me more likely, in which case (33) would just be a theorem of natural logic. (33) just does not seem to me to be the sort of thing that would vary a great deal from culture to culture.

Be that as it may, there are real examples of culture-specific assumptions that have to be characterized in order to understand various aspects of speech acts in a given culture. But this does not mean that we need to go beyond the resources of formal semantics to provide an account of speech acts. In particular, we do not need any new notion of pragmatic or non-logical inference. Ordinary semantic entailment will suffice, just as it sufficed in the case of (16) above. Cultural assumptions play the same role in semantic entailment as any other assumptions.

This brings us to conversational implicature. I would like to suggest (modestly) that implicatures are not 'loose' or informal inferences. Given the performative analysis, implicatures should turn out to be a species of semantic entailment, providing one had an adequate natural logic and an adequate analysis of the relevant culture-specific principles of social interaction. Grice's theory of conversational implicature is based on the 'cooperative principle', the idea that certain 'maxims' are to be followed in conversational situations in which the participants are cooperating. Grice's maxims can be restated as principles like the following:

(34) a. If *x* is cooperating with *y*, then *x* will do only what is relevant to the enterprise at hand, unless his actions make no difference to the enterprise [MAXIM OF RELEVANCE]
b. If *x* is cooperating with *y*, then *x* will not do less than is necessary to make the enterprise successful
c. If *x* is cooperating with *y*, then *x* will not greatly exceed his needed contribution [MAXIMS OF QUANTITY]
etc.

It seems to me that principles like those in (34) should follow from the meaning of *cooperate*, rather than being special culture-specific principles of social interaction. Since natural logic is committed to the study of

all natural language concepts, including *cooperation*, principles like those in (34) should fall within the purview of formal semantics within natural logic, and no separate set of pragmatic principles should be necessary for handling them. So far, unfortunately, neither linguists nor logicians have done any serious formal study of the logic of cooperation. Until such studies are done, we cannot say for sure whether implicatures can be handled using normal semantic entailment or whether a new, informal mode of inference needs to be characterized. What we can do now is (i) provide some evidence in favour of the proposal, (ii) show that apparent counter-examples are not real, and (iii) show that similar cases in the realm of indirectly conveyed meaning show promise of eventually being dealt with within formal semantics.

Some evidence in favour of the proposal comes from work on the presuppositions of complex sentences by Lakoff and Railton (1971) and by Karttunen (1973). They observed that in sentences, S, of the form *If A, then B*, where B presupposed C, S presupposes C with respect to context X, unless $X \cup A \vdash C$. This principle is meant to handle cases like the following:

(35) a. If Jack has children, then all of Jack's children are bald
b. If Nixon invites Angela Davis to the White House, then he will regret having invited a black militant to his residence

Assuming these sentences are of the form *If A, then B*, then in (35a), B presupposes that *Jack has children* (=C). Therefore $A = C$, and so $X \cup A \vdash C$, for any X at all. In (35b), B presupposes that *Nixon will have invited a black militant to his residence* (=C). Therefore in any context X in which it is assumed that *Angela Davis is a black militant* and that *the White House is Nixon's residence*, the condition $X \cup A \vdash C$ will be met, and so C will not be a presupposition of (35b) with respect to those contexts X.

If implicatures are really entailments in context, then we would expect the above principle, which is stated in terms of entailment in context, to work in the case of implicatures. That is, suppose we have a sentence of the form *If A, then B*, where B presupposes C and where in a context X, A implicates C. If implicature is really entailment in context, we would expect the entire sentence *If A, then B* not to presuppose C with respect to X. This prediction is bourne out, as the following example shows:

(36) If Sam asks Professor Snurd to write him a recommendation to graduate school, and Professor Snurd writes the recommendation, saying only that Sam has nice handwriting, then Sam will regret that Professor Snurd wrote him a bad recommendation

In (36), B presupposes that *Professor Snurd will have written Sam a bad recommendation* (=C). Consider every situation X in which it is assumed that if, in recommending someone for graduate school, a professor writes only that the student has a nice handwriting, then the professor is writing a bad recommendation. It will be the case that $X \cup A \vdash C$. Thus, it is predicated that (36) as a whole does not presuppose C with respect to such contexts X, which is the case. But the inference from saying only that a student has nice handwriting to giving a bad recommendation is a classic case of a Gricean implicature. (36) indicates that implicatures work like entailments in context with respect to the phenomenon of presupposition cancelling. Other implicatures seem to work the same way. Since implicatures *can* be treated as entailments in context, (36) gives us reason to believe that they *should* be treated as such, since then the presuppositional facts of (36) will be accounted for by the same principle that accounts for the presuppositional facts of (35).

In addition to providing evidence for our conjecture, we can show that apparent counter-examples are not real and that similar cases in the realm of indirectly conveyed meaning show promise of being dealt with within formal semantics. Probably the main objection to trying to treat implicatures via formal semantics is that implicatures are cancellable, while entailments are not. Consider the following examples.

(37) a. John has three children
b. John has three children--and he may even have six
(38) a. John caused Harry to leave
b. John caused Harry to leave--but Harry may not have left

On Grice's account (37a) invites the interference by means of conversational implicature that John has only three children, but does not entail it. The implicature can be cancelled, as in (37b). (37a) differs from (38a) in that (38a) has an entailment--Harry left--not an implicature. Any attempt to cancel the entailment, as in (38b), leads to a contradiction. Clearly there is a difference between (37a) and (38a), but this does not mean that the formal semantic mechanism of entailment cannot be used to handle both cases. Let me explain. The definition of entailment given above in (12) was context-dependent entailment; this is the usual model-theoretical notion. One special case of that is context-independent entailment, as defined in (39).

(39) CONTEXT-INDEPENDENT ENTAILMENT
P entails *Q* if and only if *Q* is satisfied in all models at all points of reference at which *P* is satisfied.

(38a) is a case of context-independent entailment; (37a) is not. I would like to suggest, however, that (37a) is a case of context-dependent entailment. If so, then (37a) will entail that John has only three children in some contexts, but not in others. The function of the cancellation phrase in (37b) will then be to limit the contexts appropriate for the use of the sentence to those in which the entailment does not hold.

To provide support for this claim we need to show that cancellation of implicatures is context-dependent. That turns out to be fairly easy to do.

(40) a. We've got a job for a welfare recipient who has at least three children--and the more the better. Do you definitely know someone who fills the bill?
b. We've got a job for a junior executive with children, but no more than three. Do you definitely know someone who fills the bill?
(41) Exactly how many children does John have?

Consider the sentences of (37) as being replies to (40) and (41). If (37a) is a reply to (40a), the implicature is cancellable, as shown by the fact that (37b) is a relevant and appropriate response. However, if (37a) is taken as a reply to (40b) or (41), the implicature is not cancellable, as shown by the fact that (37b) is not an acceptable response in these cases. The reason is fairly clear. The implicature is based on principle (34b). (34b) will be part of *X* in '$X \cup \{P\}$ entails *Q*' in (12). Whether or not implicatures arise due to (34b) will depend on what else is assumed in context, namely, what else *X* contains that is relevant to the 'success of the conversational enterprise'. In this case, the relevant issue is whether it matters that John has more than three children. In (40a) it does not. In (40b) and (41), it does. My claim is that if examples like the above could

be suitably formalized, the presence or absence of implicatures could be handled using context-dependent entailment, as defined in (12).

Although no significant work has yet been done on the problem of formalizing Gricean implicatures, there has been considerable investigation of other types of indirectly conveyed meanings, or in Heringer's terminology, 'indirect illocutionary force'. At present, these studies suggest that indirectly conveyed meanings might be handled using the apparatus of context-dependent semantic entailment, together with global and transderivational rules of grammar.

The basic idea in this: Grammars are taken as generating quadruples of the form (42).

(42) (S,L,C,CM), where S is a sentence (more strictly its phonetic representation), L is a model-theoretically interpreted logical structure (representing the literal meaning of the sentence), C is a consistent set of logical structures (the models in which they are satisfied represent the contexts in which the sentence has the literal meaning of L), and CM is a sequence of logical structures (representing the conveyed meanings of the sentence relative to context C--the last member of the sequence is the 'ultimately conveyed meaning')

More specifically, pairs of the form (S,L) are characterized by derivations, that is, sequences of trees linking S and L. Each derivation D uniquely characterizes a pair (S,L). Thus one could alternatively say that a grammar generates triples of the form (D,C,CM), where D determines a pair (S,L). Derivations are not well- or ill-formed in and of themselves, but only with respect to contexts C and conveyed meanings CM. Derivations are characterized by local and global correspondence rules. Transderivational rules are constraints that specify which derivations are well-formed with respect to which contexts and which conveyed meanings.

The need for distinguishing literal from conveyed meaning is fairly obvious, as cases of sarcasm show. Take a sentence like (43).

(43) Harry is a real genius

Depending on context, (43) can be understood as being either literal or sarcastic. In contexts where it is to be taken sarcastically, the literal meaning is not conveyed at all--instead its polar opposite, namely, *Harry is an idiot*, is conveyed. Although in most normal cases that linguists and logicians and philosophers of language have talked about, the literal meaning of the sentence is conveyed and perhaps other meanings as well, in sarcasm, the literal meaning is not conveyed at all. Interestingly enough, there are linguistic rules that correlate with sarcasm. R. Lakoff has observed that American English (at least many dialects) has a rule of sarcastic nasalization, whereby the sentence as a whole or the portion one is being sarcastic about is nasalized. Thus, if (43) or the sarcastic portion of it--*real genius*--is nasalized, the sentence can only have a sarcastic reading. This nasalization rule therefore seems to have a transderivational condition on it limiting the conveyed meaning of the sentence to the polar opposite of the literal meaning.

The reason that conveyed meanings are given as a sequence is that sentences often convey more than one meaning at once--the literal meaning plus one or more others. Take the following cases.

(44) Can you pass the salt?
(45) I want a beer

(46) Why don't you ask Harriet for a date?
(47) Your mother would like it if you asked Harriet for a date

Each of these sentences has a literal reading, and in certain situations the literal meaning can be conveyed. For example, (44) is literally a question about the addressee's abilities, and can be used as such, say, by a doctor trying to determine how well his patient's injured arm was healing. Of course, (44) is more frequently used to convey a request. (45) is literally a statement about the speaker's desires, and might be used as such, say, by a starving captive in reply to his sadistic captor's question 'What do you want most?'. More typically, it would be used to convey a request. (46) and (47) have very different literal meanings, but could both be used as suggestions to the effect that the addressee ask Harriet for a date.

But where these sentences convey requests or suggestions, their literal meanings are also conveyed, and in fact the nonliteral meanings arise only by virtue of the literal meanings being conveyed. Thus, (44) in the right context can be both a question about one's abilities and by virtue of that, a request. Gordon and I proposed that the appropriate way to account for the relation between literal and conveyed meanings was by using context-dependent entailment together with the performative analysis. We suggested that there exists what we called 'conversational postulates' on which such relations were based, and that the literal meanings taken together with the postulates would, given the performative analysis and context-dependent entailment, entail the conveyed meanings. (48) is an example of one of our proposed postulates (slightly revised).

(48) $assume(x, \neg relevant(want(x,Q))) \ \& \ say(x,y,want(xQ)) \supset request(x,y,Q)$
[If x assumes that it is not relevant that he wants Q and he says to y that he wants Q, then he is requesting that y do Q]

Thus, (48) would account for the fact that (45) is a request in exactly those contexts where the mere question of my *desire* for a beer was irrelevant. Given the performative analysis for (45) and context-dependent entailment, (48) will do the job.

It ought to be pointed out that there is independent motivation for (48) from nonperformative cases.

(49) a. Sam assumed that the pure question of his desires was irrelevant
b. Sam said to Mary that he wanted a beer
c. Sam requested that Mary get him a beer

(49a) and (49b) together entail (49c).

Gordon and I, in setting up postulates like (48) and calling them 'conversational postulates' were assuming that they were culture-specific principles of social interaction. I now have some doubt about that, and think that they may simply be meaning postulates or theorems of natural logic that happen to contain performative predicates.

In summary, let me state what I hope to have convinced you of:

(50) a. There is strong semantic-pragmantic evidence supporting a uniform performative analysis.
b. Given a uniform performative analysis, the treatment of indexicals in natural language does not require that additional coordinates for speaker, hearer, and time and place of utterance be added to points of reference.
c. No additional pragmatic theory is necessary for an account of

speech acts and conversational implicatures, provided that one accepts the goals of natural logic and the need for global transderivational grammars.

FOOTNOTES

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[2] *w* = world coordinate; *p* = place coordinate
s = speaker coordinate; *d* = demonstrative coordinate
h = hearer coordinate; *a* = assignment coordinate
t = time coordinate

[3] See fn. 4.

[4] I am also assuming that (i) is a meaning postulate

(i) *believe(x,P and Q)* ⊐ *believe(x,P) and believe(x,Q)*

Part of assuming rationality consists of assuming that the person involved does not have contradictory beliefs

(ii) *believe(x,P)* ⊐ ¬ *believe(x,¬P)*

Given (14), (17), (i) and (ii), (17') will yield a contradiction.

(iii)	a.	*sincere(a,state(a,b,P-and believe(a,¬P)))*	[= (17')]
	b.	*believe(a,P and believe(a,¬P))*	[from (14)]
	c.	*believe(a,P) and believe(a,believe(a,¬P))*	
	d.	*believe(a,believe(a,¬P))*	[simplification,c]
	e.	*believe(a,¬P)*	[from (17)]
	f.	*believe(a,P)*	[simplification,c]
	g.	¬ *believe(a,¬P)*	[from (ii)]
	h.	*believe(a,¬P) and* ¬ *believe(a,¬P)*	[e and g]

CONTRADICTION

Since (17') yields a contradiction given an assumption of rationality, the only way to make (17') noncontradictory would be to assume that Sam in (17') held contradictory beliefs.

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APPENDIX I

An important point to bear in mind with respect to both Lewis' discussion and mine is that if so-called 'truth conditions' are taken to be satisfaction conditions in the model-theoretical sense, then in both Lewis' system and mine they are meant to apply to logical structures, *not directly to surface structures*. In both systems it makes no sense to think of a surface sentence being directly satisfied in a model at a point of reference, since satisfaction conditions are given for logical structures and not for surface strings. Because of this, a certain confusion can arise when one does not distinguish between the normal English surface adjective *true* and the technical term *true in a model*, taken to mean *satisfied in a model*. One can speak in English of a surface sentence as being *true* or *false* in the nontechnical senses of those terms. Superficially it might appear that the normal English surface adjective *true* could be predicated of a surface sentence, while the technical *true* meaning *satisfied in a model* cannot.

We can see more easily what is going on here if we consider such classic examples as the following [from Postal (1969), and Borkin (1971)].

(1) a. IBM went up six points
    b. IBM stock went up six points
(2) a. Proust is impossible to read
    b. Proust's works are impossible to read
(3) a. This page is illegible
    b. The writing on this page is illegible
(4) a. This page is impossible to understand
    b. What is expressed by the writing on this page is impossible to understand

In each case the (a) sentence is understood in the same way as the (b) sentence. *Proust* in (2a) is understood as referring to *Proust's works*, while *Proust* in (5a) refers to the remains of Proust's body, while *Proust* in (5b) refers to the person himself,

(5) a. Proust is buried in France
    b. Proust wrote a lot

Similarly, *this page* in (3a) refers to the writing on the page and in (3b) refers to the content of what is written (or printed) on that page, while in (6) it refers to the physical page itself.

(6) This page weighs 1/50th of a gram

There are various ways in which one might try to deal with such sentences as (1a)-(4a). Postal has suggested that the (a) sentences in those cases be derived from the structures underlying the (b) sentences via a deletion rule (or rules), and the constraints on such sentences cited by Borkin and Lawler have given plausibility to such a suggestion. On the other hand, if one dislikes the deletion solution, one might propose instead a semantic solution whereby, for instance, the logical structure of (2a) would have the

surface name *Proust* corresponding to the same logical structure element(s) as the surface name *Proust* in (5b), but would have different references in the two sentences. So far as I have been able to tell, such a suggestion would be difficult to implement adequately in terms of formal semantics for the following reason: Somehow the surface NP *Proust* in (2a) does not simply refer to Proust's works. In a sense, it also refers to Proust himself, and if it refers to Proust's works, it does so by means of its reference to the writer himself. This is exactly what happens under Postal's proposal. If the logical structure of (2a) is the same as that of (2b) and if *Proust* in (2a) is derived via a deletion rule from the structure underlying *Proust's work*, then in the logical structure of (2a) *Proust* refers to the man himself, and *Proust's works* refers to the man's works. Under Postal's proposal, the ordinary reference assignments used in formal semantics will suffice, while under the alternative proposal, we would have to control the reference of a description or a proper name in a different way. An obvious suggestion would be a 'pragmatic' solution, adding to points of reference a new coordinate for each proper name and each description in the language, i.e., an infinite number of new coordinates, and one would somehow have to mark each description and proper name in a logical structure to tell whether it was to have its ordinary reference or whether it was to refer to what was specified in its 'pragmatic' coordinate. Such a solution would not only have to have an additional infinite sequence of pragmatic coordinates, as well as having special markings in logical structure for ordinary vs. 'pragmatic' reference, but it would also have all the complications that would go along with Postal's proposal in addition. The reason is that there are empirical constraints on what a surface NP can ordinarily be understood as referring to. For example, *Proust* in (2a) cannot be understood as referring to the works that Proust did *not* write, nor as referring to Shakespeare's works, nor as referring to the works that my cousin Herbie believes that Proust wrote, nor as referring to this paper (which I have not given the title *Proust*). The principal unsolved problem with Postal's proposal is how to constrain his proposed deletion rule so as to get the right surface NPs from the right underlying NPs. Exactly the same problem would remain in the pragmatic proposal. It is for this reason that I prefer Postal's deletion proposal. It requires less apparatus. Both proposals require the same constraints, but Postal's proposal uses the ordinary formal semantic apparatus to account for reference, and does not require extra pragmatic coordinates, that is, extra indicators of nonordinary reference.

Let us now return to the surface adjective *true*. Note that (7a) is understood to mean the same as (7b).

(7) a. That sentence is true
b. The proposition that the logical structure of that sentence expresses is true

That sentence in (7a) has the same reference as *the proposition that the logical structure of that sentence expresses* in (7b), while in (8) it refers to the sentence itself.

(8) That sentence contains five words

The problem is exactly that encountered in (1)-(4) above, and I would again suggest Postal's proposed solution: derive (7a) from the structure underlying (7b) by a deletion rule. Under this proposal, the English adjective *true* would not be predicated of surface sentences themselves, but only of propositions expressed by the logical structures of those sentences. And in both Lewis' proposal and mine, propositions are expressed not by surface

sentences directly, but by the logical structures associated with those surface sentences. Thus, according to both our proposals, truth is predicated not of a surface sentence, but of the proposition expressed by the logical structure associated with the surface sentence.

In other words, in order to give satisfaction conditions for a given surface structure *S*, we must first pick out a logical structure *S* related to it by the grammar of the language. The question is: can one always find a unique logical structure *S* associated with any given surface structure *S*? It should be observed that the problem of determining satisfaction conditions for a surface *S* overlaps in part with the problem of assigning reference to surface structure nominals. Given a surface structure *N*, we must pick out a logical structure *N* associated with it, and then find out what that logical structure *N* refers to at a given point of reference. The question here is whether one can always find a unique logical structure *N* associated with an arbitrary surface structure *N*. Under Postal's beheading proposal, the answer to this question in general is no. For example, in (2a),

(2) a. Proust is impossible to read

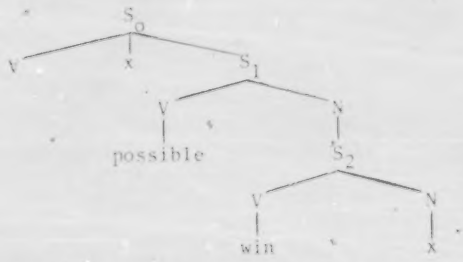
the surface *N Proust* would have associated with it two logical structure *N*s, one of which would refer to Proust and the other to Proust's works. Thus the question 'What does the surface *N Proust* refer to in surface sentence (2a)?' makes no sense, since surface *N*s can be said to refer only by virtue of there being an associated logical structure *N* that refers. If the question is rephrased, as it should be, to 'What does the logical structure *N* associated with the surface structure *N Proust* in (2a) refer to?', it becomes clear that the question makes no sense since the presupposition is false. It should also be noted that the fact that such a question does not have a sensible answer in no way creates a problem for the assignment of reference so far as the logical structure of (2a) is concerned.

The situation is the same with surface structure *S*s. Surface structure *S*s will not in general be associated with unique logical structure *S*s and therefore, it may make no sense to ask for the satisfaction conditions for a surface structure *S*. Consider (8a), for example.

(8) a. It is possible for anyone to win

In (8a), *for anyone to win* is a surface *S* (at least on one reading). Assuming for the sake of discussion that the logical structure of (8a) is (8b) [we have left out the declarative performative, since it is irrelevant for the moment], we might ask what are the satisfaction conditions for the surface structure *S for anyone to win*?

(8) b.



For this to be a sensible question, there would have to be a unique

logical structure *S* in (8b) that *for anyone to win* in (8a) is associated with. But there is no such *S*. The reason is that there are certain necessary conditions given in (9) that must be met in order for an *S*-node in a surface structure tree to be 'associated with' an *S*-node in a logical structure tree in discussions about the 'truth' of a surface structure sentence or clause.

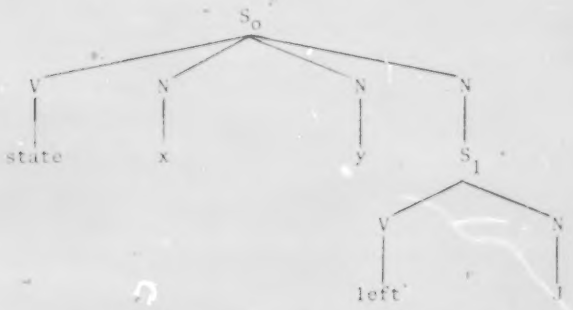
(9) Let S_s be a surface structure *S*-node and S_l be a logical structure *S*-node.
   a. The logical structure elements that correspond to the surface structure elements dominated by S_s are all dominated by S_l.
   b. The surface structure elements that correspond to the logical structure elements dominated by S_l are all dominated by S_s.

S_2 is not a candidate, since the logical structure element corresponding to *anyone* is not dominated by S_2. And S_0 is not a candidate since it dominates *possible*, which does not correspond to any element in the surface *S* 'for anyone to win'. Thus in general it does not make sense to ask for satisfaction conditions for a random surface structure *S*.

Suppose, for the sake of discussion, that the grammar of English pairs the logical structure (11) with the surface sentence (10).

(10) John left

(11)



Suppose we were to ask what the satisfaction conditions were for the surface *S John left* (= 10). In order for there to be an answer to that question, there would have to be a unique logical structure *S* associated with the surface *S* of (10). But if (11) is the logical structure of (10), then there would be two logical structure *S*s, not one, associated with the surface *S, John left*. For this reason, it would make no sense in this case to ask for the satisfaction conditions for the surface *S, John left*, though it would make perfect sense to ask for the satisfaction conditions of either S_0 or S_1 in (11). Note, however, that since words like 'true' and 'felicitous' can give clues as to which logical structure *S* is meant, it would make sense to ask whether the sentence in (10) is true (in the ordinary sense of the term, rather than in Lewis' extended sense) on a given occasion, just as it would make sense to ask whether it was felicitously used on a given occasion. To ask whether (10) is true is to ask whether S_1 in (11) is satisfied, and to ask whether it is felicitiously asserted is to ask whether S_0 is satisfied.

As we have seen, it makes sense to talk about satisfaction in a model *directly* only for logical structure *S*s; and it makes sense to talk about satisfaction in a model indirectly for a surface strucutre *S* only if there

is a unique logical structure *S* which is associated by the grammar with that surface *S* and in terms of which satisfaction can be directly defined. We are in the same position with respect to entailment, which after all is defined in terms of satisfaction. Strictly speaking, entailment is a relation between logical structures, not surface sentences. We can define entailment indirectly for surface sentences just in case we can associate a unique structure *S* with each of the surface sentences. Consider the following examples.

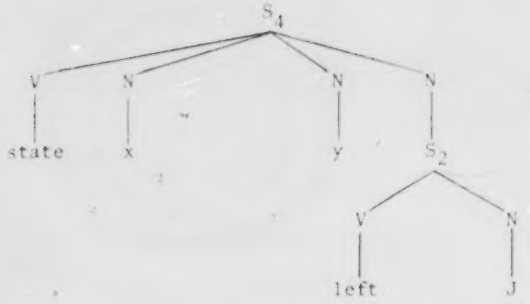
(12) a. John and Bill left
b. John left

(13) a. I state that John and Bill left
b. I state that John left

Under the performative analysis for declaratives, the (a) and (b) sentences in (12) and (13) will be associated with the logical structures in (14a) and (14b) respectively.

(14) a.

b.



With respect to (14) we can say the following about entailment.

(15) a. S_1 entails S_2
b. S_0 does not entail S_4

Since entailment is a relation directly defined between logical structures

and only indirectly between sentences depending on which logical structure *S*s they are associated with, we can only talk about entailment relations in (12) and (13) if we know which logical structure *S*s we are talking about. Consider for example the sentences in (13). If we can find a locution to make it clear that we are associating (13a) with S_1 and (13b) with S_2, then we can speak of an entailment relation of the appropriate sort holding.

(16) That (13a) is a true statement on occasion *t* entails that (13b) is a true statement on occasion *t*.

By using the locution about true statements, we make it clear that we are associating (13a) with S_1 and (13b) with S_2, since:

(17) a. (13a) is a true statement on occasion *t* if and only if S_1 in (14a) is satisfied on occasion *t*.
b. (13b) is a true statement on occasion *t* if and only if S_2 in (14b) is satisfied on occasion *t*.

The point again is that when we speak of true statements, we are speaking of direct objects of statement predicates, not whole sentences or the logical structures corresponding to them.

Now consider (18).

(18) Sentence (13a) entails sentence (13b)

(18) would be understood as meaning (19).

(19) The truth of the proposition expressed by the logical structure *S* associated with sentence (13a) entails the truth of the proposition expressed by the logical structure *S* associated with the sentence (13b).

Without any special locutions about true statements, the constraints of (19) would be in force for the entire surface sentences (rather than just for the surface *S* marking the direct object of a predicate of stating, as in the case above.) By (9a), (13a) and (13b) could not be associated with S_1 and S_2 respectively, but rather with S_0 and S_4 respectively. Since S_0 and S_4 describe speech acts, it is inappropriate to speak of their 'truth'; moreover, there is no entailment relation between S_0 and S_4. Thus, there are two reasons why (19) does not hold.

Let us now consider (12). If we use the 'true statement' locution, we get the same results as in (16).

(16') That (12a) is a true statement on occasion *t* entails that (12b) is a true statement on occasion *t*.
(17') a. (12a) is a true statement on occasion *t* if and only if S_1 in (14a) is satisfied on occasion *t*.
b. (12b) is a true statement on occasion *t* if and only if S_2 in (14b) is satisfied on occasion *t*.

But because (12) contains no overt performative verb, (12) displays a difference with respect to (13) when one looks at statements parallel to (18) such as (18').

(18') Sentence (12a) entails sentence (12b).

(18') is understood as (19').

(19') The truth of the proposition expressed by the logical structure *S* associated with sentence (12a) entails the truth of the proposition expressed by the logical structure *S* associated with sentence (12b).

(18') is unlike (18) in that principle (19) permits both S_0 and S_1 to be 'associated with' the surface *S* dominating sentence (12); and (19') also permits both S_4 and S_2 to be 'associated with' the surface *S* dominating sentence (12b). But since one can only speak of S_1 and S_2 as being 'true', while it is inappropriate to speak strictly of the 'truth' of S_0 and S_4, the surface nominals *sentence (12a)* and *sentence (12b)* in (18') wind up being associated with S_1 and S_2 respectively. Since there is an entailment relation between S_1 and S_2, (18') not only makes sense, but is true.

The point here is that the grammar of English may assign sentence (12a) the logical structure (14a), while the surface nominal *sentence (12a)* in the *sentence* (18') may be taken as referring to the content of only a subtree of (14a), namely S_1. The reason why I have taken the trouble to discuss this matter at such length is that a failure to make such distinctions can lead one into making a fallacious argument against the performative analysis for declaratives. (20) contains the gist of such an argument.

(20) (i) (14a) is the logical structure of sentence (12a) and (14b) is the logical structure of sentence (12b).
(ii) Sentence (12a) entails sentence (12b).
(iii) But (14a) [= S_0] does not entail (14b) [= S_4].
(iv) Therefore, assuming that entailment is based on logical structure, (i) cannot be correct.

The argument is fallacious. In order to make the argument correct, we would have to assume in addition:

(21) *Sentence (12a) entails sentence (12b)* is true if and only if the logical structure of sentence (12a) entails the logical structure of sentence (12b).

But this need not be a correct assumption, as we saw above. The truth of (20ii) [= (18')] depends upon what the surface nominals *sentence (12a)* and *sentence (12b)* refer to in that sentence. As we have seen, these surface nominals may be understood as referring to the proposition expressed by a subtree of the logical structure of the surface sentence. This is not particularly strange, considering the general complexities that we have seen to be involved in the assignment of reference to surface nominals, and the general constraints in (9) above.

APPENDIX 2

Given transformational grammar of the Aspects vintage, it made sense to ask 'Do transformations preserve meaning?' Within generative semantics, this question does not make sense, for various reasons. First and most obviously, there are no transformations. In their place there are correspondence rules which may have global and/or transderivational constraints associated with them. Secondly, the role of correspondence rules is to correctly relate surface structures and logical structures, given various constraints involving context, conveyed meanings, etc. The rules will have to account correctly for all aspects of meaning; but the term 'preserving meaning' will be itself meaningless in such a theory. Since there is more to meaning than just the model-theoretical interpretations of logical structures--in particular, those features of meaning associated with context and conveyed

meaning--one would not expect all aspects of the meaning of a sentence to be given by the model-theoretical interpretation of the logical structure of the sentence. The rule of performative deletion, as discussed by R. Lakoff (1973), is a case in point. As Lakoff observes, overt performatives are used under different contextual conditions than nonovert performatives. Thus, sentences with overt performatives would differ in their contextual meaning from sentences with nonovert performatives. This would be accounted for in the grammar of English by placing transderivational conditions concerning context on the rule of performative deletion.

If one had a theory like the Aspects theory, with transformations and a notion of deep structure, and if one stated performative deletion in such a theory as a transformation, then performative deletion would, as expected, not be a meaning-preserving transformation in such a theory, since the contextual constraints on sentences in the derivation of which the rule has applied would differ from those in which the rule had not applied. But this issue does not arise in generative semantics, since the notion of 'preserving meaning' does not make sense in such a theory. In generative semantics, meanings are assigned to sentences by rules of grammar. One may ask whether they are assigned correctly or incorrectly, but not whether they are 'preserved'.

APPENDIX 3

Ross and Sadock, in their versions of the performative analysis, assume that the logical structure of every sentence has a performative predicate expressing the literal content of that speech act which is performed when the speaker utters the given sentence in an appropriate situation. I am not making such as assumption but rather two weaker assumptions:

(I) Every sentence when used in a given situation to perform a speech act has associated with it in that situation a logical structure which contains a performative predicate which expresses the literal content of the speech act.
(II) Every sentence which contains in its surface structure a deictic (or 'indexical') element, i.e., an element which has meaning only with reference to a speech act, has in its logical structure a performative predicate which expresses the literal content of that speech act.

(I) and (II) leave open the possibility that there are sentences of natural languages which do not have any deictic elements and which can be considered in the abstract apart from any implicit or explicit speech act. Such sentences do seem to occur in English, though they constitute a very tiny proportion of sentences of the language. They include certain sentences about mathematics and the physical sciences, as well as definitions. Compare the following two groups of sentences.

(1) a. Two plus two equals four
    b. Force equals mass times acceleration
    c. Whales are mammals
(2) a. My uncle came here yesterday
    b. Whales are becoming extinct
    c. The earth has one satellite
    d. That is a wombat

Though the sentences in (1) have surface structure present tense elements, those tense elements have no relation to the time that such sentences were uttered (written, etc.). They are true (or false) independent of who

utters them, or when or where or under what circumstances they are uttered, and independently of whether they are uttered at all. Thus the tenses in (1) are not deictic elements. The tenses in (2) are, however, deictic elements. The truth of each sentence in (2) depends on when it is uttered. Moreover, the truth or falsity of (2a) depends on who utters it and where the utterance takes place. (2d) depends for a truth value on what the speaker refer to by *that*.

A tiny proportion of natural language sentences have no deictic elements in them at all, and if we ignore instances where such sentences, including those in (1), are considered in the abstract rather than being asserted by a speaker, then my proposals in (I) and (II) become identical with the Ross-Sadock proposal. The disparity between our positions, though miniscule so far as natural language phenomena on the whole are concerned, is important with respect to the history of the study of formal semantics. Formal semantics grew out of the study of formal logic, which in turn concerned itself primarily if not wholly with nondeictic sentences abstracted away from speech situations, since it was concerned with mathematics (and science in general). Mathematics can be formalized without taking speech acts into account. However, when formal semantics is extended from its traditional domain to natural languages as wholes, the study of nondeictic sentences abstracted from speech situations pales into insignificance. Not that such cases should not be accounted for; (I) and (II) are set up to account for them. According to (I) and (II), sentences like those in (1) would be associated with two logical structures; one for cases in which the sentence is uttered in the performance of a speech act--typically an assertion--and another in which the sentence is considered in the abstract, as logicians usually consider them. In the former (speech act) case, the logical structure of the sentence would contain a performative predicate expressing the literal content of the speech act; in the latter case, since the sentence can be totally abstracted from any speech act situation, there would be no performative predicate in logical structure.

The Ross-Sadock proposal requires that all logical structures contain performatives in the appropriate place; my proposal requires no such constraint. (I) and (II), rather then being constraints placed on grammars, would simply fall out automatically once the principles governing the occurrence of deictic elements were stated correctly. Each surface structure deictic element would correspond to some argument in logical structure that would be a clause-mate of some performative predicate. Thus, the presence of a deictic element would require the presence of a performative predicate in logical structure; correspondingly, if a sentence contained no deictic element, no performative predicate would be required--one might be there or not. If a performative predicate were there, then in order for the logical structure to be satisfied in a model, some speech act would have to occur. With no performative predicate, there would be no corresponding speech act, and we would get the consideration-in-the-abstract case.

Pragmatic Presuppositions[1]

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There is a familiar intuitive distinction between what is *asserted* and what is *presupposed* in the making of a statement. If I say that the Queen of England is bald, I presuppose that England has a unique queen, and assert that she is bald. If I say that Sam regrets that he voted for Nixon, I presuppose that Sam voted for Nixon, and assert that he feels bad about it. If I say that Ted Kennedy is the only person who could have defeated Nixon in 1972, I presuppose that Ted Kennedy could have defeated Nixon in 1972, and assert that no one else could have done so. Philosophers have discussed this distinction mainly in the context of problems of reference. Linguists have discussed it in many contexts as well. They have argued that the phenomenon of presupposition is a pervasive feature of the use of natural language, one that must play a role in the semantic analysis of many words and phrases.

The principal criterion that has been used to identify presuppositions can be stated in the following way: Q is presupposed by an assertion that P just in case under normal conditions one can reasonably infer that a speaker believes that Q from either his assertion or his denial that P. One who denies the example statements listed above--who says that the Queen of England is *not* bald, that Sam does *not* regret that he voted for Nixon, or that Ted Kennedy is *not* the only person who could have defeated Nixon in 1972, normally makes the same presuppositions as the person who makes the affirmative statements. Linguists have used this criterion to identify many examples of the phenomenon. The criterion, and many of the examples, are relatively clear and uncontroversial; it is clear that there is a phenomenon to be explained. But it is much less clear what kind of explanation of it should be given. Granted that either the statement that the Queen of England is bald, or the speaker who makes it, presupposes that England has a unique queen. But what is it about the statement, or the speaker, which constitutes this fact? There are two very different kinds of answers to this question.

The first answer is that presupposition is a semantic relation holding between sentences or propositions. This kind of account draws the distinction between presupposition and assertion in terms of the content or truth-conditions of the sentence uttered or the proposition expressed. Here is an example of such a definition: a proposition that P presupposes that Q if and only if Q must be true in order that P have a truth-value at all. The presuppositions of a proposition, according to this definition, are necessitated by the truth, and by the falsity, of the proposition. When any presupposition is false, the assertion lacks a truth-value.

The second answer is that presupposition should be given a pragmatic analysis. The distinction between presupposition and assertion should be drawn, not in terms of the content of the propositions expressed, but in

terms of the situations in which the statement is made--the attitudes and intentions of the speaker and his audience. Presuppositions, on this account, are something like the background beliefs of the speaker--propositions whose truth he takes for granted, or seems to take for granted, in making his statement.

The pragmatic account is closer to the ordinary notion of presupposition, but it has frequently been assumed that the semantic account is the one that is relevant to giving a rigorous theoretical explanation of the linguistic phenomena. I want to argue that this assumption is wrong. I will suggest that it is important for correctly understanding the phenomena identified by linguistics to give the second kind of analysis rather than the first. In terms of the pragmatic account, one can give intuitively natural explanations of some facts that seem puzzling when presupposition is viewed as a semantic relation. The pragmatic account makes it possible to explain some particular facts about presuppositions in terms of general maxims of rational communication rather than in terms of complicated and *ad hoc* hypotheses about the semantics of particular words and particular kinds of constructions. To argue this, I will sketch an account of the kind I want to defend, and then discuss some of the facts identified by linguists in terms of it.

Let me begin by rehearsing some truisms about communication. Communication, whether linguistic or not, normally takes place against a background of beliefs or assumptions which are shared by the speaker and his audience, and which are recognized by them to be so shared. When I discuss politics with my barber, we each take the elementary facts of the current political situation for granted, and we each assume that the other does. We assume that Richard Nixon is the President, that he recently defeated George McGovern by a large margin, that the United States has recently been involved in a war in Vietnam, which is a small country in Southeast Asia, and so forth. That we can reasonably take these facts for granted obviously makes our communication more efficient. The more common ground we can take for granted, the more efficient our communication will be. And unless we could reasonably treat *some* facts in this way, we probably could not communicate at all.

Which facts or opinions we can reasonably take for granted in this way, as much as what further information either of us wants to convey, will guide the direction of our conversation--will determine what is said. I will not say things that are already taken for granted, since that would be redundant. Nor will I assert things incompatible with the common background, since that would be self-defeating. My aim in making assertions is to distinguish among the possible situations which are compatible with all the beliefs or assumptions that I assume that we share. Or it could be put the other way around: the common background is defined by the possible situations which I intend to distinguish among with my assertions, and other speech acts. Propositions true in all of them are propositions whose truth is taken for granted.

Although it is normally inappropriate because unnecessary for me to assert something that each of us assumes the other already believes, my assertions will of course always have consequences which are part of the common background. For example, in a context where we both know that my neighbor is an adult male, I say "My neighbor is a bachelor," which, let us suppose, entails that he is adult and male. I might just as well have said "my neighbor is unmarried." The same information would have been conveyed (although the nuances might not have been exactly the same). That is, the *increment of information*, or of content, conveyed by the first statement is the same as that conveyed by the second. If the asserted proposition were accepted, and added to the common background, the resulting situation would be the same as if the second assertion were accepted and added to the background.

This notion of common background belief is the first approximation to the notion of pragmatic presupposition that I want to use. A proposition *P* is a pragmatic presupposition of a speaker in a given context just in case the speaker assumes or believes that *P*, assumes or believes that his addressee assumes or believes that *P*, and assumes or believes that his addressee recognizes that he is making these assumptions, or has these beliefs.

I do not propose this as a definition or analysis, first since it is far from clear what it is to believe or assume something, in the relevant way and second since even assuming these notions to be clear, the definition would need further qualification. My aim is not to give an analysis but rather to point to a familiar feature of linguistic contexts which, I shall argue, is the feature in terms of which a certain range of linguistic phenomena should be explained. The notion has, I think, enough intuitive content to enable us to identify a lot of particular cases, and the general outlines of the definition are clear enough to justify some generalizations about presuppositions which help to explain the facts. Before defending this claim by discussing some of the facts, I will make two remarks about the general notion.

First, note that it is persons rather than sentences, propositions or speech acts that have or make presuppositions. This goes against the prevailing technical use of the term, according to which presuppositions, whether semantic or pragmatic, are normally taken to relate two linguistic things. One might define such a relation in terms of the pragmatic notion in something like one of the following ways: (a) One might say that a sentence *x* presupposes that *Q* just in case the use of *x* to make a statement is appropriate (or normal, or conversationally acceptable) only in contexts where *Q* is presupposed by the speaker; or (b) one might say that the statement that *P* (made in a given context) presupposes that *Q* just in case one can reasonably infer that the speaker is presupposing that *Q* from the fact that the statement was made; or (c) one might say that the statement that *P* (made in a given context) presupposes that *Q* just in case it is necessary to assume that the speaker is presupposing that *Q* in order to understand or interpret correctly the statement. As stated, these suggested definitions are vague, and each is different from the other. But I do not think it would be fruitful to refine them, or to choose one over the others. It is true that the linguistic facts to be explained by a theory of presupposition are for the most part relations between linguistic items, or between a linguistic expression and a proposition. They are, as I interpret them, facts about the constraints, of one kind or another, imposed by what is said on what is appropriately presupposed by the speaker, according to various different standards of appropriateness. But I think all the facts can be stated and explained directly in terms of the underlying notion of speaker presupposition, and without introducing an intermediate notion of presupposition as a relation holding between sentences (or statements) and propositions.

This last point is a strategic recommendation, and not a substantive claim. As I said, one *could* define such a notion in various ways; I just doubt the theoretical utility of doing so. My purely strategic motive for emphasizing this point is that I want to avoid what I think would be a fruitless debate over which of various explications of the notion of pragmatic sentence presupposition best accords with the use of the term "presupposition" by linguists. I do not want to deny that, in an adequate theory of conversation, one will need a notion or notions of conversational acceptability, and that once one has such a notion one has all the material for a definition of pragmatic sentence presupposition. A rough definition of "conversational acceptability" might be something like this: a speech act is conversationally acceptable in the relevant sense just in case it can reasonably be expected to accomplish its purpose in the normal way in which the normal purposes of

such speech acts are accomplished. But such a notion would get its content from an account of the mechanisms by which the normal purposes of speech acts are accomplished, and the notion of speaker presupposition is intended to be one theoretical concept useful for giving such an account. It is in this way that it is a more basic concept than the concept of conversational acceptability.

Second, let me suggest one way that the definition given above needs to be qualified. In normal, straightforward serious conversational contexts where the overriding purpose of the conversation is to exchange information, or conduct a rational argument, what is presupposed by the speaker, in the sense intended, is relatively unproblematic. The presuppositions coincide with the shared beliefs, or the presumed common knowledge. The difficulties in applying the notion come with contexts in which other interests besides communication are being served by the conversation. If one is talking for some other purpose than to exchange information, or if one must be polite, discreet, diplomatic, kind, or entertaining as well as informative, then one may have reason to act as if the common background were different than one in fact knows it to be. For example, when I talk to my barber, neither of us expects to learn anything; we are talking just to be civil, and to pass the time. If we haven't much to say, we may act as if the background of common knowledge is smaller than it really is. "Cold today, isn't it?" "Sure is, windy too." "Well, spring will be here before long." Although there is little actual communication going on here, it is clear that what is going on is to be understood in terms of genuine communication. We are pretending to communicate, and our pretense can be explained in terms of the same categories as a serious exchange of information.

In other cases, a speaker may act as if certain propositions are part of the common background when he knows that they are not. He may want to communicate a proposition indirectly, and do this by presupposing it in such a way that the auditor will be able to infer that it is presupposed. In such a case, a speaker tells his auditor something in part by pretending that his auditor already knows it. The pretense need not be an attempt at deception. It might be tacitly recognized by everyone concerned that this is what is going on, and recognized that everyone else recognizes it. In some cases, it is just that it would be indiscreet, or insulting, or tedious, or unnecessarily blunt, or rhetorically less effective to openly assert a proposition that one wants to communicate.[2]

Where a conversation involves this kind of pretense, the speaker's presuppositions, in the sense of the term I shall use, will not fit the definition sketched above. That is why the definition is only an approximation. I shall say that one actually does make the presuppositions that one seems to make even when one is only pretending to have the beliefs that one normally has when one makes presuppositions. Presupposing is thus not a mental attitude like believing, but is rather a linguistic disposition--a disposition to behave in one's use of language as if one had certain beliefs, or were making certain assumptions.[3]

The presumed background information--the set of presuppositions which in part define a linguistic context--naturally imposes constraints on what can reasonably or appropriately be said in that context. Where the constraints relate to a particular kind of grammatical construction, or to a particular expression or category of expressions, one has a linguistic fact to be explained. This is the case with the sample sentences with which I began. One of the facts could be stated like this: it is inappropriate to say "The Queen of England is bald" (or to say "the Queen of England is not bald") except in a context in which it is part of the presumed background information that England has a queen. Compare this with a description that interprets the phenomena in terms of a semantic concept of presupposition: the proposi-

tion expressed by "the Queen of England is bald" has a truth-value only if England has a unique queen. The first description, in contrast to the second, makes no claim at all about the content of the statement--about the truth-conditions of what is said. The description in terms of the pragmatic notion does not rule out a semantic *explanation* for the fact that a certain presupposition is required when a certain statement is made, but neither does it demand such an explanation. That is, one *might* explain why it is appropriate for a speaker to say "the Queen of England is bald" only if he presupposes that England has a queen in terms of the following two assumptions: first, that the statement lacks a truth-value unless England has a queen, and second, that one normally presupposes that one's statements have a truth-value. But one also might explain the fact in a different way. The *facts* about presuppositions, I am suggesting, can be separated from a particular kind of semantic explanation of those facts. This separation of the account of presupposition from the account of the content of what is said will allow for more diversity among presupposition phenomena than would be possible if they all had to be forced into the semantic mold. Let me suggest, more specifically, four of the advantages of making this move.

First, if presupposition is defined independently of truth-conditions, then it is possible for the constraints on presuppositions to vary from context to context, or with changes in stress or shifts in word order, without those changes requiring variation in the semantic interpretation of what is said. This should make possible a simpler semantic theory; at the very least, it should allow for more flexibility in the construction of semantic theories. For example, D.T. Langendoen points out in a paper on presupposition and assertion that normally, if one said "my cousin isn't a boy anymore" he would be asserting that his cousin had grown up, presupposing that he is male. But one might, in a less common context, use the same sentence to assert that one's cousin had changed sexes, presupposing that she is young.[4] If a semantic account of presupposition is given of this case, then one must say that the sentence is therefore ambiguous. On the pragmatic account, one just points to two different kinds of situations in which a univocal sentence could be used.

Second, if presupposition is defined independently of truth-conditions, then one can separate the question of entailment relations from the question of presupposition. On the semantic account, presupposition and entailment are parallel and incompatible semantic relations. *A* presupposes that *B* if and only if *B* is necessitated by *both A* and its denial. *A* entails *B* if and only if *B* is necessitated by *A* but *not* by its denial. Thus the claim that the sentence, "Sam realizes that *P*" *entails* that *P* conflicts with the claim that that sentence presupposes, in the semantic sense, that *P*. But using the pragmatic account, one may say that sometimes when a presupposition is required by the making of a statement, what is presupposed is also entailed, and sometimes it is not. One can say that "Sam realizes that *P*" entails that *P*--the claim is false unless *P* is true. "Sam does not realize that *P*," however, does not entail that *P*. That proposition may be true even when *P* is false. All this is compatible with the claim that one is required to presuppose that *P* whenever one asserts or denies that Sam realizes it.

Third, the constraints imposed by a statement on what is presupposed seem to be a matter of degree, and this is hard to explain on the semantic account. Sometimes no sense at all can be made of a statement unless one assumes that the speaker is making a certain presupposition. In other cases, it is mildly suggested by a speech act that the speaker is taking a certain assumption for granted, but the suggestion is easily defeated by countervailing evidence. If a speaker says to me, "Sam was surprised that Nixon lost the election," then I have no choice but to assume that he takes it for granted that Nixon lost. But if he says, "If Eagleton hadn't been dropped from the Democratic

ticket, Nixon would have won the election" (without an "even" before the "if" or a "still" after the "Nixon"), there is a suggestion that the speaker presupposes that Nixon in fact did not win, but if the statement is made in the right context, or with the right intonation, the suggestion is overruled. This difference in degree, and variation with context is to be expected on the pragmatic account, since it is a matter of the strength of an inductive inference from the fact that a statement was made to the existence of a background assumption or belief.

Fourth, and perhaps most important, the pragmatic analysis of presupposition, because it relates the phenomena to the general communication situation, may make it possible to explain some of the facts in terms of general assumptions about rational strategy in situations where people exchange information or conduct argument. One way to explain the fact that a particular assertion requires or suggests a certain presupposition is to hypothesize that it is simply a fact about some word or construction used in making the assertion. In such a case, the fact about the presupposition requirement must be written into the dictionary, or into the semantics. But since we have an account of the *function* of presuppositions in conversations, we may sometimes be able to explain facts about them without such hypotheses. The propositions that P and that Q may be related to each other, and to common beliefs and intentions, in such a way that it is hard to think of a reason that anyone would raise the question whether P, or care about its answer, unless he already believed that Q. More generally, it might be that one can make sense of a conversation as a sequence of rational actions only on the assumption that the speaker and his audience share certain presuppositions. If this kind of explanation can be given for the fact that a certain statement tends to require a certain presupposition, then there will be no need to complicate the semantics or the lexicon.

For example, consider the word "know." It is clear that "x knows that P" entails that P. It is also clear that in most cases when anyone asserts or denies that x knows that P, he presupposes that P. Can this latter fact be explained without building it into the semantics of the word? I think it can. Suppose a speaker were to assert that x knows that P in a context where the truth of P is in doubt or dispute. He would be saying in one breath something that could be challenged in two different ways. He would be leaving unclear whether his main point was to make a claim about the truth of P, or to make a claim about the epistemic situation of x (the knower), and thus leaving unclear what direction he intended or expected the conversation to take. Thus, given what "x knows that P" means, and given that people normally want to communicate in an orderly way, and normally have some purpose in mind, it would be unreasonable to assert that x knows that P in such a context. One could communicate more efficiently by saying something else. For similar reasons, it would normally be inappropriate to say that x does not know that P in a context where the truth of P was in question. If the speaker's reason for believing his assertion were that he thought that P was false, or that he thought that x didn't believe P, or didn't have reason to believe that P, then his statement would be gratuitously weak. And it would be unusual for a speaker to be in a position to know that one of these situations obtained, without knowing which.

This is a tentative and incomplete sketch of an explanation. Much more would have to be said to make it convincing. My point is to make it plausible that, in some cases at least, such explanations might be given, and to argue that where they can be given, there is no reason to build specific rules about presuppositions into the semantics.

I want now to illustrate these advantages of the pragmatic account by looking at some linguistic facts in terms of it. The two sets of facts I will consider are taken from two recent papers by Lauri Karttunen.[5]

First, on a distinction between two kinds of factive verbs. It is well known that among verbs which take a nominalized sentence complement (for example *believe, know, intend, see*) one can distinguish a subclass known as factive verbs (*know, regret, discover, see*, as contrasted with *believe, intend, assert, claim*). A number of syntactic and semantic criteria are used to draw the distinction, but the distinguishing mark that is relevant is the following: if *V* is a factive verb, then *x V's that P* presupposes (and, I would say, entails as well) that *P*. If I assert or deny that Jones regrets, realizes, or discovers that Nixon won the election, then I presuppose that Nixon did in fact win. Karttunen has drawn a further distinction among two kinds of factive verbs which, he argues, requires a distinction between two kinds of presupposition relations. One kind of factive verb (labeled the *full factives*) includes *regret, forget* and *resent*. The basis for the distinction is as follows: with full factives, it is not only an assertion or denial of the proposition *X V's that P* that requires the presupposition that *P*, but also the *supposition* that *x V's* that *P* in the antecedent of a conditional, or the claim that the proposition *might* be true. With semi-factives, it is only the assertion or denial that requires the presupposition. For example, consider the two statements

Sam may regret that he voted for Nixon.
If Sam regrets that he voted for Nixon, then he is a fool.

Because these two statements clearly require the presupposition that Sam voted for Nixon, *regret* is seen to be a full factive.

The following is Karttunen's example to illustrate the contrast between full factives and semi-factives. Compare

If I { *regret* / *realize* / *discover* } *later that I have not told the truth, I will confess it to everyone.*

In the first statement, the speaker clearly presupposes that he has not told the truth. In the other two cases, he clearly does not presuppose this. Thus *realize* and *discover* are seen to be semi-factives.

To explain the difference, Karttunen postulates a distinction between a strong and a weak kind of semantic presupposition. If *P* is necessitated by *Possibly Q*, and by *Possibly not-Q*, then *Q* strongly presupposes that *P*. Weak semantic presuppositions are defined in the usual way.

In discussing this example, I want to dispute both the data, and the theoretical account of them. I agree that there is a sharp contrast in the particular example given, but the matter is less clear if one looks at other examples. Consider.

If Harry discovers that his wife is playing around, he will be upset.
If Harry had discovered that his wife was playing around, he would have been upset.
If Harry had realized that his wife was playing around, he would have been upset.
Harry may realize that his wife has been playing around.
Harry may never discover that his wife has been playing around.

There is, I think, in all these cases a presumption that the speaker presupposes that Harry's wife is, or has been, playing around. The presumption is stronger in some of the examples than in others, but it seems to me that

in some of them it is as strong as with *regret*. Further, if we assume that with the so-called semi-factives like *discover* and *realize*, there is *always* a presumption that the speaker presupposes the truth of the proposition expressed in the complement, we can still explain why the presumption is defeated in Karttunen's particular example. The explanation goes like this: if a speaker explicitly supposes something, he thereby indicates that he is not *pre*supposing it, or taking it for granted. So when the speaker says "if I realize later that *P*," he indicates that he is not presupposing that he will realize later that *P*. But if it is an open question for a speaker whether or not he will at some future time have come to realize that *P*, he can't be assuming that he already knows that *P*. And if he is not assuming that he himself knows that *P*, he can't be assuming that *P*. Hence *P* cannot be presupposed. A roughly parallel explanation will work for *discover*, but not for *regret*.

One can explain another of Karttunen's examples in a similar way. Consider the three questions:

Did you { *regret* / *realize* / *discover* } *that you had not told the truth?*

Here *realize* seems to go with *regret* and not with *discover*. The first two questions seem to require that the speaker presuppose that the auditor did not tell the truth, while the third does not. Again, we can explain the difference, even while assuming that there is a presumption that the presupposition is made in all three cases. The reason that the presumption is defeated in the third case is that the speaker could not make that presupposition without assuming an affirmative answer to the question he is asking. But in general, by asking a question, one indicates that one is not presupposing a particular answer to it. This explanation depends on the particular semantic properties of *discover*, and will not work for *realize* or *regret*.[5] It also depends on the fact that the subject of the verb is the second-person pronoun. Hence if the explanation is right, one would expect the presupposition to reappear in the analogous third-person question, "Did Sam discover that he hadn't told the truth?" It seems that it does.

Since on the pragmatic account, the constraints on presuppositions can vary without the truth-conditions changing, we can allow presupposition differences between first- or second-person statements and questions and the corresponding third-person statements and questions without postulating separate semantic accounts of propositions expressed from different points of view. So, while we have noted differences in the presuppositions required or suggested by the following two statements,

> *If Harry discovers that his wife has been playing around, he will be upset.*
> *If I discover that my wife has been playing around, I will be upset* (said by Harry).

this difference does not prevent us from saying that the two statements both have the same semantic content--that the same proposition is expressed in both cases. It would not be possible to say this on a semantic account of presupposition.

If the explanations I have sketched are on the right track, then we can account for at least some of the differences between factive and semi-factive verbs without distinguishing between two different kinds of presupposition relations. We can also account for some differences among semi-factives, and differences between first- and third-person statements without complica-

ting the semantics. The explanation depends on just two things: first, some simple and very general facts about the relation between pragmatic presuppositions and assertions, questions, and suppositions; second, on the ordinary semantic properties of the particular verbs involved.[7]

The second set of facts that I will discuss concerns the presuppositions of compound sentences: How do the presuppositions required by a conditional or conjunctive statement relate to the presuppositions that would be required by the component parts, stated alone? In general, what is the relation between the presuppositions required by an assertion that *A* and the assertion that *B* on the one hand, and by an assertion that *A and B* or that *if A, then B* on the other? Karttunen defends the following answer to the question: let *S* be a sentence of the form *A and B* or *if A, then B*. *S* presupposes that *C* if and only if either *A* presupposes that *C*, *or B* presupposes that *C* and *A* does not semantically entail that *C*. In other words, the presuppositions of a conjunction are the presuppositions required by either of the conjuncts, *minus any required by the second conjunct which are entailed by the first*. The presuppositions of a conditional are the presuppositions of either antecedent or consequent minus those required by the consequent and entailed by the antecedent. So if I say "Harry is married, and Harry's wife is a great cook," I assert, and do not presuppose, that Harry is married. But the second conjunct, stated alone (*Harry's wife is a great cook*), would require the presupposition that Harry is married. The sentence with conjuncts in reverse order would be unacceptable in any normal context. (*Harry's wife is a great cook, and Harry is married*).

Now if we regard Karttunen's generalization as a generalization about *semantic* presuppositions, then we will interpret it as a hypothesis about the way the truth-value (or lack of it) of a conjunction or conditional relates to the truth-values of the parts. The hypothesis has the consequence that the conjunction *and* is not truth-functional, since the truth-value of a conjunctive statement will in some cases depend on entailment relation between the conjuncts. It has the consequence that *and* is not symmetric. *A and B* may be false while *B and A* lacks a truth-value. Finally, it has the consequence that the simple conjunction *and* is governed by mysteriously complicated rules.

On the other hand, if we regard Karttunen's generalization as a generalization about *pragmatic* presuppositions, then we can reconcile it with the standard truth-functional account of *and*, and we can explain the generalization without postulating any *ad hoc* semantic or pragmatic rules. The explanation goes like this: first, once a proposition has been asserted in a conversation, then (unless or until it is challenged) the speaker can reasonably take it for granted for the rest of the conversation. In particular, when a speaker says something of the form *A and B*, he may take it for granted that *A* (or at least that his audience recognizes that *he* accepts that *A*) after he has said it. The proposition that *A* will be added to the background of common assumptions before the speaker asserts that *B*. Now suppose that *B* expresses a proposition that would, for some reason, be inappropriate to assert except in a context where *A*, or something entailed by *A*, is presupposed. Even if *A* is *not* presupposed initially, one may still assert *A and B* since by the time one gets to saying that *B*, the context has shifted, and it is by then presupposed that *A*.

As with the explanation sketched in the earlier discussion, this explanation rests on just two things: first, a simple pragmatic assumption about the way presuppositions shift in the course of a conversation--an assumption that says, roughly, that a speaker may build on what has already been said; second, an uncontroversial assumption about the semantic properties of the word *and*--in particular, that when one asserts a conjunction, he asserts both conjuncts. If we interpret presupposition to mean *pragmatic* presupposition, then we can

deduce Karttunen's generalization from these two almost trivial assumptions.

The analogous generalization about conditional statements is explainable on equally simple assumptions. Here we need first the assumption that what is explicitly *supposed* becomes (temporarily) a part of the background of common assumptions in subsequent conversation, and second that an *if* clause is an explicit supposition. Again, Karttunen's generalization can be derived from these obvious assumptions.

I have been arguing in this paper for the fruitfulness of separating semantic from pragmatic features of linguistic expressions and situations, and of explaining a certain range of phenomena in terms of pragmatic rather than semantic principles. This goes against the trend of the work of generative semanticists such as George Lakoff and John Ross, who have emphasized the difficulty of separating syntactic, semantic, and pragmatic problems, and who have sometimes suggested that such distinctions as between syntactic and semantic deviance or semantic and pragmatic regularities are of more use for avoiding problems than for solving them. Partly to respond to this concern, I will conclude with some general remarks about the distinction between semantics and pragmatics, and about what I am *not* recommending when I suggest that the distinction be taken seriously.

First remark: semantics, as contrasted with pragmatics, can mean either the study of *meaning* or the study of *content*. The contrast between semantic and pragmatic claims can be either of two things, depending on which notion of semantics one has in mind. First, it can be a contrast between claims about the particular conventional meaning of some word or phrase on the one hand, and claims about the general structure or strategy of conversation on the other. Grice's distinction between conventional implicatures and conversational implicatures is an instance of this contrast. Second, it can be a contrast between claims about the truth-conditions or *content* of what is said--the proposition expressed--on the one hand, and claims about the *context* in which a statement is made--the attitudes and interests of speaker and audience--on the other. It is the second contrast that I am using when I argue for a pragmatic rather than a semantic account of presuppositions. That is, my claim is that constraints on presuppositions are constraints on the contexts in which statements can be made, and not constraints on the truth-conditions of propositions expressed in making the statements. I also made use of the other contrast in arguing for this claim. I conjectured that one can explain many presupposition constraints in terms of general conversational rules without building anything about presuppositions into the meanings of particular words or constructions. But I make no general claim here. In some cases, one may just have to write presupposition constraints into the dictionary entry for a particular word. This would make certain presupposition requirements a matter of *meaning*, but it would not thereby make them a matter of *content*. There may be facts about the meaning of a word which play no role at all in determining the truth-conditions of propositions expressed using the word.

Second remark: in recommending a separation of content and context I am not suggesting that there is no interaction between them. Far from it. The semantic rules which determine the content of a sentence may do so only relative to the context in which it is uttered. This is obviously the case with sentences using personal pronouns, demonstratives, quantifiers, definite descriptions, or proper names. I suspect it happens in less obvious cases as well. But this interaction does not prevent us from studying the features which define a linguistic context (such as a set of pragmatic presuppositions) in abstraction from the propositions expressed in such contexts, or from studying the relationships among propositions in abstraction from the contexts in which they might be expressed.

A final remark: in some cases, distinctions such as that between semantic

and pragmatic features may be used as a way to set problems aside. Some linguists have accused other linguists of using the distinction between syntax and semantics in this way. Deviant sentences which seem to conflict with syntactic generalizations are not treated as counterexamples, but instead are thrown into a "semantic wastebasket" to be explained away by some future semantic theory. In the same way, some may be suspicious that I am setting up a pragmatic wastebasket, and recommending that all the interesting problems be thrown away.

I do not think that this is always a bad procedure, but it is not what I am suggesting here. I am recommending instead the development and application of a pragmatic theory in which detailed explanations of phenomena relating to linguistic contexts can be given. It is true that traditionally the more well-developed and the more rigorous linguistic theories have focused on questions of grammar and content, while the discussions which emphasized the role of conversational context have been more informal and less theoretical. But there is no necessity in this. Potentially at least, a theory of pragmatics, and the notion of pragmatic presupposition can be as precise as any of the concepts in syntax and semantics. Although the explanations I have sketched in this paper are informal and incomplete, I think they suggest a strategy for giving explanations of linguistic phenomena relating to contexts which are both rigorous and intuitively natural.[9]

FOOTNOTES

[1] This paper was read at the University of Texas conference on performatives, conversational implicature, and presupposition in March, 1973, as well as at New York University. I, and I hope the paper, benefited from stimulating comments by linguists and philosophers at both places.

[2] This is a special case of what Grice has called *exploitation*, since the speaker exploits the rules governing normal conversation in order to communicate something which is not explicitly said. See H.P. Grice, "Logic and Conversation," unpublished.

[3] It was suggested by Jerry Sadock (personal communication) that the definition should be modified in another way to account for examples of the following kind: I am asked by someone who I have just met, "Are you going to lunch?" I reply, "No, I've got to pick up my sister." Here I seem to *presuppose* that I have a sister even though I do not assume that the speaker knows this. Yet the statement is clearly acceptable, and it does not seem right to explain this in terms of pretense, or exploitation. To meet this problem, Sadock suggests replacing the clause in the definition, "speaker assumes or believes that the addressee assumes or believes that *P*" with the clause, "speaker assumes or believes that the addressee *has no reason to doubt* that *P*."

The reason I resist this suggestion, even though I recognize the force of the example, is that some basic generalizations about speaker presuppositions would fail if it were adopted. For example, one important generalization, alluded to above, is that it is unnecessary, in fact inappropriate, to assert what is presupposed. But consider a routine lecture or briefing by an acknowledged expert. It may be that everything he says is something that the audience has no reason to doubt, but this does not make it inappropriate for him to speak. The problem is that the modification would work only for cases where the addressee could infer what was being presupposed from the overt speech act. But this is not the only case where speaker presuppositions are important.

Two alternative responses to the example are possible: (a) one can explain it in terms of exploitation; (b) one can deny that there is a presupposition made at all in this kind of example.

To respond in the first way is, I admit, to stretch the notion of exploi-

tation, first because the example lacks the flavor of innuendo or diplomatic indirection which characterizes the clearest cases of communication by pretense, and second because in the best cases of exploitation, it is the main point of the speech act to communicate what is only implied, whereas in this example, the indirectly communicated material is at best only a minor piece of required background information. Nevertheless, the explanation of how communication takes place in this example may be thought to be similar in form to explanations of how it takes place in the more familiar cases: the addressee infers that the speaker accepts that *Q* from the fact that he says that *P* because normally one says that *P* only when it is common background knowledge that *Q*.

To take the second option is to deny the generalization that the speaker *always* presupposes the existence of a unique referent (in the relevant domain of discourse) fitting any definite description (like "my sister") which he uses. To make this plausible, one would have to give an explanation of why one is *usually* expected to presuppose the existence of a unique referent when one uses a definite description--an explanation which also explains the exceptions to the rule.

[4] D. Terence Langendoen, "Presupposition and Assertion in the Semantic Analysis of Nouns and Verbs in English," in *Semantics: An interdisciplinary Reader in Philosophy, Linguistics and Psychology*, ed. by Danny D. Steinberg and Leon A. Jakobovits (Cambridge, England: Cambridge University Press, 1971).

[5] Lauri Karttunen, "Some Observations on Factivity" and "Presuppositions of Compound Sentences," *Linguistic Inquiry*, IV (1973).

[6] The relevant difference between *realize* and *discover* is this: because *realize* is a stative verb, a past tense statement of the form *x didn't realize that P* must be about some particular time in the past (determined by the context), and not about *all* times in the past. This means that *x didn't realize that P* may be true, even though *x now* knows that P. Therefore, a speaker may assume that his addressee knows or assumes that *P* without prejudging the question whether or not he realizes (at the relevant past time) that *P*. In contrast, because *discover* is an inchoative verb, *x didn't discover that P* may be about *all* times in the past. For this reason, normally, *x didn't discover that P* implies that x has not *yet* discovered that *P*, and so does not now know that *P*. Therefore, if a speaker presupposed that *P*, he assumes that *x has* discovered that *P*, and so assumes a particular answer to the question he is asking.

[7] Two disclaimers: First, I do not want to leave the impression that I think I have explained very much here. I have not made any attempt to explain the source of the presumption that the complements of both factive and semi-factive verbs are presupposed. I have tried to explain only how the presumption is canceled in certain cases. Also, the presumption is clearly harder to defeat in some cases than in others: harder with *realize* than with *discover*, and harder with full factives than with semi-factives. I have said nothing that would explain this. My hope, however, is that such explanations can be given using the general strategy which I am recommending. Second, I do not want to deny that there are systematic differences between factives and semi-factives. One difference is that full factives all require not only the presupposition that the proposition expressed in the complement is true, but also the presupposition that the subject of the verb knows or knew that it is. None of the semi-factives require or suggest this second presupposition; in fact, they rule it out.

[8] In a paper given at the Texas conference on performatives, conversational implicatives, and presuppositions, Karttunen put forward an explanation of his generalization which is very similar to this. Our accounts were developed independently.

[9] I have been accused, partly on the basis of this concluding paragraph, of being overly optimistic about the possibiiity of a formal theory of pragmatics which is both rigorous and sufficiently detailed to provide substantive explanations of linguistic phenomena. This accusation may be just, but my main point here is independent of this. However easy or difficult it proves to be to develop an adequate theory of conversation, one cannot simplify the task by building conversational rules into a semantic theory of the content of what is said.

Presupposition and Linguistic Context*

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According to a pragmatic view, the presuppositions of a sentence determine the class of contexts in which the sentence could be felicitously uttered. Complex sentences present a difficult problem in this framework. No simple "projection method" has been found by which we could compute their presuppositions from those of their constituent clauses. This paper presents a way to eliminate the projection problem. A recursive definition of "satisfaction of presuppositons" is proposed that makes it unnecessary to have any explicit method for assigning presuppositions to compound sentences. A theory of presuppositions becomes a theory of constraints on successive contexts in a fully explicit discourse.

What I present here is a sequel to a couple of my earlier studies on presuppositions. The first one is the paper "Presuppositions of Compound Sentences" (Karttunen 1973a), the other is called "Remarks on Presuppositions" (Karttunen 1973b). I won't review these papers here, but I will start by giving some idea of the background for the present paper.

Earlier I was concerned about two things. First, I wanted to show that there was no adequate notion of presupposition that could be defined in purely semantic terms, that is, in terms of truth conditions. What was needed was a pragmatic notion, something along the lines Stalnaker (1972) had suggested, but not a notion of the speaker's presupposition. I had in mind some definition like the one given under (1).

(1) Surface sentence A pragmatically presupposes a logical form L, if and only if it is the case that A can be felicitously uttered only in contexts which entail L.

The main point about (1) is that presupposition is viewed as a relation between sentences, or more accurately, as a relation between a surface sentence and the logical form of another. By "surface sentence" I mean expressions of a natural language as opposed to sentences of a formal

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language which the former are in some manner associated with. "Logical forms" are expressions of the latter kind. "Context" in (1) means a set of logical forms that describe the set of background assumptions, that is, whatever the speaker chooses to regard as being shared by him and his intended audience. According to (1), a sentence can be felicitously uttered only in contexts that entail all of its presuppositions.

Secondly, I argued that, if we look at things in a certain way, presupposition turns out to be a relative notion for compound sentences. The same sentence may have different presuppositions depending on the context in which it is uttered. To see what means, let us use "X" as a variable for contexts (sets of logical forms), "A" and "B" stand for (surface) sentences, and "P_A" and "P_B" denote the set of logical forms presupposed by A and B, respectively. Let us assume that A and B in this instance are simple sentences that contain no quantifiers and no sentential connectives. Furthermore, let us assume that we know already what A and B presuppose, that is, we know the elements of P_A and P_B. Given all that, what can we say about presuppositions of complex sentences formed from A and B by means of embedding and sentential connectives? This is the notorious "projection problem" for presuppositions (Morgan 1969, Langendoen & Savin 1971). For instance, what are the presuppositions of "If A then B"?

Intuitively it would seem that sentential connectives such as *if... then* do not introduce any new presuppositions. Therefore, the set $P_{\text{if A then B}}$ should be either identical to or at least some proper subset of the combined presuppositions of A and B. This initially simple idea is presented in (2).

(2) $P_{\text{if A then B}} \subseteq P_A \cup P_B$

However, I found that when one pursues this line of inquiry further, things become very complicated. Consider the examples in (3).

(3) (a) If Dean told the truth, Nixon is guilty too.
(b) If Halderman is guilty, Nixon is guilty too.
(c) If Miss Woods destroyed the missing tapes, Nixon is guilty too.

In all of these cases, let us assume that the consequent clause "Nixon is guilty too" is interpreted in the sense in which it presupposes the guilt of someone else. The question is: does the compound sentence as a whole carry that presupposition? In the case of (3a), the answer seems to be definitely *yes*, in the case of (3b) definitely *no*, and in the case of (3c) a *maybe*, depending on the context in which the sentence is used. For example, if the destruction of the tapes is considered a crime, then Miss Woods would be guilty in case she did it, and (3c) could be a conditional assertion that Nixon was an accomplice. In this context the sentence does not presuppose that anyone is guilty. But in contexts where the destruction of the tapes in itself would not constitute a crime (3c) apparently does presuppose the guilt of someone other than Nixon.

These examples show that if we try to determine the presuppositions of "If A then B" as a particular subset of the joint presuppositions of A and B, the initial simplicity of that idea turns out to be deceptive. In reality it is a very complicated enterprise. The kind of recursive principle that seems to be required is given in (4a) in the form it appears in Karttunen (1973b). (4b) says the same in ordinary English.

(4) (a) $P_{\text{if A then B}}/X = P_A/X \cup (P_B/X \cup A - (E_{X \cup A} - E_X))$
where E_X is the set of logical forms entailed (in the standard

sense) by X, and $X \cup A$ is the result of adding the logical form of A to X.

(b) The presuppositions of "If A then B" (with respect to context X) consist of
   (i) all of the presuppositions of A (with respect to X) and
   (ii) all of the presuppositions of B (with respect to $X \cup A$) except for those entailed by the set $X \cup A$ and not entailed by X alone.

One would like to find a better way to express this, but I am not sure there is one.[2] It really is a complicated question.

So much for the background. What I want to show now is that there is another way to think about these matters, and about presuppositions of complex sentences in particular. Let us go back for a moment to the attempted pragmatic definition in (1). The point of that definition is that the presuppositions of a sentence determine in what contexts the sentence could be felicitously used. A projection method, such as (4a), associates a complex sentence with a class of such contexts by compiling a set of logical forms that must be entailed in any context where it is proper to use the sentence. Thus we say that the sentence "If A then B" can be felicitously uttered in context X only if X entails all of the logical forms in the set $P_{\text{if A then B}}/X$, defined in (4a).

There is another, much simpler, way to associate complex sentences with proper contexts of use. Instead of characterizing these contexts by compiling the presuppositions of the sentence, we ask what a context would have to be like in order to satisfy those presuppositions. Of course, it is exactly the same problem but, by turning it upside down, we get a surprisingly simple answer. The reason is that we can answer the latter question directly, without having to compute what the presuppositions actually are.

The way we go about this is the following. We start by defining, not presupposition, but a notion of *satisfaction of presuppositions*. This definition is based on the assumption that we can give a finite list of basic presuppositions for each simple sentence of English. For all cases where A is a simple, non-compound sentence, satisfaction is defined as in (5).

(5) Context X *satifies-the-presuppositions-of* A just in case X entails all of the basic presuppositions of A (that is, $P_A \subseteq E_X$).

The basic presuppositions of a simple sentence presumably can be determined from the lexical items in the sentence and from its form and derivational history, say, the application of certain transformations such as Pseudo-Clefting. To give a somewhat oversimplified example, consider the word *too* that occurs in the examples under (3). As a first approximation to the meaning of *too* we could give a condition like the one in (6), which is based on Green (1968).

(6) Context X satisfies-the-presuppositions-of "a is P too" only if either (i) X entails "b is P" for some b ($\neq$a), or (ii) X entails "a is Q" for some Q ($\neq$P).

This in turn is equivalent to saying that a simple sentence like "Nixon is guilty too" either has a presupposition that someone else is guilty or that Nixon has some other property.[3] One or the other must be entailed in context.

For compound sentences we define satisfaction recursively by associat-

ing each part of the sentence with a different context. The basic idea behind this was independently suggested in both Stalnaker (1973) and Karttunen (1973b). For conditionals, satisfaction is defined in (7).

(7) Context X satisfies-the-presuppositions-of "If A then B" just in case (i) X satisfies-the-presuppositions-of A, and (ii) X∪A satisfies-the-presuppositions-of B.

As before, the expression "X∪A" denotes the set that results from incrementing X with the logical form of A.[4] For conjunctions, that is, sentences of the form "A and B", satisfaction is defined just as in (7). For disjunctions, sentences of the form "A or B", we have "-A" instead of "A" in part (ii). Examples that illustrate and support these principles can be found in my earlier papers.[5]

Note that *satisfies-the-presuppositions-of* is a relation between contexts and sentences. As I have tried to indicate orthographically, we are defining it here as a primitive, irreducible locution. Eventually it would be better to replace this clumsy phrase with some simple verb such as "admits", which has the right pragmatic connotations. I keep the former term only to bring out the connection between (4) and (7) more clearly. At the end, of course, it comes down to having for each simple sentence a set of logical forms that are to be entailed (in the standard logical sense) by a certain context. What is important is that we define satisfaction for complex sentences directly without computing their presuppositions explicitly. There is no need for a projection method. Secondly, in case a sentence occurs as part of a larger compound, its presuppositions need not always be satisfied by the actual conversational context, as long as they are satisfied by a certain local extension of it. For example, in order to admit "If A then B" a context need only satisfy-the-presuppositions-of A, provided that the presuppositions of B are satisfied by the context as incremented with the logical form of A.

It can be shown that the new way of doing things and the old way are equivalent. They sanction the use of any sentence in the same class of contexts. Although it may not be obvious at first, the statement in (8) is true just in case (9) holds, and vice versa.

(8) X satisfies-the-presuppositions-of "if A then B".
(9) $P_{\text{if A then B}/X} \subseteq E_X$

The proof is straight-forward and will not be presented in detail. Here it suffices to note that, by (4a), (9) is equivalent to the conjunction of (10) and (11).

(10) $P_A \subseteq E_X$
(11) $P_B - (E_{X \cup A} - E_X) \subseteq E_X$

Similarly, by (7), (8) is equivalent to the conjunction of (12) and (13).

(12) X satisfies-the-presuppositions-of A.
(13) X ∪ A satisfies-the-presuppositions-of B.

Given our basic definition of satisfaction in (5) and that A and B are simple sentences, it follows that (10) and (12) are equivalent. So it remains to be shown that (11) and (13) also amount to the same thing. This can be done with simple set-theoretic means by proving the equivalence of (11) and (14). (Note that $E_X \subseteq E_{X \cup A}$).

(14) $P_B \subseteq E_{X \cup A}$

(14) in turn says the same thing as (13) provided that B is a simple sentence, as we have assumed here. In short, (8) and (9) are equivalent by virtue of the fact that (10) is equivalent to (12) and (11) is equivalent to (13). Consequently, the class of contexts that satisfy-the-presuppositions-of "If A then B" by principle (7) is the same class of contexts that entail all of the presuppositions assigned to this sentence by (4a).[5]

As we move on to more complicated sentences, the advantages of (7) over (4) become more and more clear. For example, consider sentences of the form (15).

(15) If (A and B) then (C or D).

It is a very cumbersome undertaking to compute the set of logical forms presupposed by (15) by means of rules like (4a). But it is a simple matter to tell by principles like (7) what is required of a context in which (15) is used. This is shown in (16). Note that (16) is not a new definition but a statement that directly follows from (7) and the corresponding principles for conjunctions and disjunctions.

(16) Context X satisfies-the-presuppositions-of "If (A and B) then (C or D)" just in case
- (i) X satisfies-the-presuppositions-of A,
- (ii) X∪A satisfies-the-presuppositions-of B,
- (iii) X∪A & B satisfies-the-presuppositions-of C,
- (iv) X∪A & B∪~C satisfies-the-presuppositions-of D.

As we study complex cases such as this one, we see that we could look at satisfaction of presuppositions in an even more general way. As illustrated in (16), by our definition a given initial context satisfies-the-presuppositions-of a complex sentence just in case the presuppositions of each of the constituent sentences are satisfied by a certain specific extension of that initial context. For example, the presuppositions of D in (15) must be satisfied by a set of logical forms that consist of the current conversational context as incremented with the logical forms of "A and B" and the negation of C. In compound sentences, the initial context is incremented in a left-to-right fashion giving for each constituent sentence a *local context* that must satisfy its presuppositions.[7] We could easily define a notion of local context separately and give the following general definition of satisfaction for all compound sentences.

(17) Context X satisfies-the-presuppositions-of S just in case the presuppositions of each of the constituent sentences in S are satisfied by the corresponding local context.

Note that in this new framework the earlier question of how it comes about that presupposition is a relative notion for compound sentences does not arise at all. Also, the distinction between cases like (3a) and (3b) is of no particular importance. What is required in both cases is that the presupposition of the consequent clause contributed by the word *too* be entailed by the current conversational context as incremented with the logical form of the antecedent. In case of (3b), we recognize that this condition is met, no matter what the initial context is like, by virtue of the particular antecedent. In (3a) it appears that the antecedent does not contribute anything towards satisfying the presuppositions of the consequent, at least, not in contexts that immediately come to mind. Hence we can be sure that the presuppositions of the consequent are satisfied in the incremented context just in case they are already satisfied initially. It seems to me now that this is a much better way

of putting it than to talk about a presupposition being "shared" by the compound in (3a) and being "cancelled" or "filtered away" in (3b), as I did in the earlier papers. Such locutions can be thrown out with the projection method that gave rise to them.

So far I have only discussed complex sentences that are formed with sentential connectives. However, satisfaction of presuppositions can easily be defined for all kinds of complex sentences. Without going into any great detail, I will try to outline how this is done for sentences with sentential subjects or objects.

Let us represent such sentences with the expression "v(...A...)" where "V" stands for a complementizable verb and "A" for an embedded subject or object clause. Sentences with verbs like *believe* and *want* that require non-sentential subjects are represented with "v(a,A)" where "a" stands for the underlying subject. In this connection we have to distinguish three kinds of complementizable verbs, as shown in (18).

(18) (I) Verbs of saying: *say, ask, tell, announce*, etc. (including external negation).
(II) Verbs of propositional attitude: *believe, fear, think, want*, etc.
(III) All other kinds of complementizable verbs: factives, semi-factives, modals, one- and two-way implicatives, aspectual verbs, internal negation.

Essentially this amounts to a distinction between verbs that are "transparent" with respect to presuppositions of their complements (type III) and verbs that are "opaque" to one degree or another (types I and II).[8] These distinctions of course are not arbitrary but presumably follow from the semantics of verb complementation in some manner yet to be explained.

For sentences where the main verb is of the last type, we need the condition in (19).

(19) If v is of type III, context X satisfies-the-presuppositions-of "v(...A...)" only if X satisfies-the-presuppositions-of A.

Thus in a case such as (20), where *may, force,* and *stop* all are of type III, a context satisfies-the-presuppositions-of the whole sentence only if it satisfies those of all the nested complements.[9]

(20) The courts may force Nixon to stop protecting his aides.

For example, a context for (20) ought to entail that Nixon has or will have been protecting his aides.

For verbs of propositional attitude we need a condition such as (21), where the expression "$B_a(X)$" stands for the set of beliefs attributed to a in X.

(21) If v is of type II, context X satisfies-the presuppositions-of "v(a,A)" only if $B_a(X)$ satisfies-the-presuppositions-of A.[10]

The condition says that sentences such as (22) require that the subject of the main sentence be understood to have a set of beliefs that satisfy-the-presuppositions-of the complement.

(22) John fears that Nixon will stop protecting his aides.

To satisfy the presuppositions-of (22), a context must ascribe to John a

set of beliefs that satisfy-the-presuppositions-of "Nixon will stop protecting his aides".

Finally, with verbs of type I a complex sentence does not necessarily require that the presuppositions of the complement be satisfied, as we can observe by contemplating examples such as (23).

(23) Ziegler announced that Nixon will stop protecting his aides.

(23) can be spoken felicitously, perhaps even truly, no matter what the facts are understood to be or whether anyone is supposed to hold a set of beliefs that satisfy the presuppositions of the complement.

As a final example of complementation, consider the sentence in (24).

(24) John thinks that, if Rosemary believes that Nixon has been protecting his aides, she is afraid that Nixon will stop protecting them.

By applying the principles in (21) and (7) recursively, we arrive at the conclusion that, if a given context, X, satisfies the presuppositions of (24), then the presuppositions of the last clause in (24), "Nixon will stop protecting his aides", are satisfied by the set (25).

(25) B_{Rosemary} (B_{John} (X)) $\cup$ Rosemary believes that Nixon has been protecting his aides).

This set contains all of the beliefs attributed to Rosemary in a context that consists of all of the beliefs attributed to John in X and the logical form of the given sentence. By virtue of its last-mentioned ingredient, this set in (25) is guaranteed to entail that Nixon has been protecting his aides. Therefore, (24) does not require that this particular presupposition of the last clause be entailed in contexts where (24) is used, or by the set of beliefs that in those contexts are attributed to John or to Rosemary. As far as I am able to tell, this is the correct result.

This concludes what I have to say about satisfaction of presuppositions. What we are interested in is associating sentences with proper contexts of use. We can achieve this goal directly by defining a notion of satisfaction as a relation between contexts and sentences. In this way we avoid the many complications that have to be built into a projection method that does the same by associating each sentence with a set of presuppositions. The efforts by Langendoen and Savin (1971), Morgan (1969, 1973), Keenan (1973), Lakoff and Railton (1971), Herzberger (1973), myself (1973a, 1973b), and many others to find such a method now seem misplaced to me. The best solution to the projection problem is to do away with it. The moral of this paper is: do not ask what the presuppositions of a complex sentence are, ask what it takes to satisfy them.

I will conclude with a few comments about the notion of *context*. It is implicit in what I have said about satisfaction that a conversational context, a set of logical forms, specifies what can be taken for granted in making the next speech act. What this common set of background assumptions contains depends on what has been said previously and other aspects of the communicative situation. In a fully explicit discourse, the presuppositions of the next sentence uttered are satisfied by the current context. This guarantees that they are true in every possible world consistent with the context. Of course, it is possible that the actual world is not one of them, since people may be talking under various misapprehensions. Satisfaction of presuppositions is not a matter of what the facts really are, just what the conversational context is.

Once the new sentence has been uttered, the context will be incremented to include the new shared information. Viewed in this light, a theory of presuppositions amounts to a theory of a rational order of contexts from smaller to larger sets of shared information. At each step along the way that a fully explicit discourse proceeds, the current context satisfies the presuppositions of the next sentence that in turn increments it to a new context.

There are definitions of pragmatic presupposition, such as (1), which suggest that there is something amiss in a discourse that does not proceed in this ideal, orderly fashion. Those definitions make it infelicitous to utter sentences whose presuppositions are not satisfied by the current conversational context. They outlaw any leaps and shortcuts. All things considered, this is an unreasonable view. Consider the examples in (26).

(26) (a) We *regret* that children cannot accompany their parents to commencement exercises.
(b) There are *almost* no misprints in this book.
(c) I would like to introduce you to *my wife*.
(d) John lives in *the third brick house down the street from the post office*.
(e) It has been *pointed out* that there are counter examples to my theory.

The underlined items in these sentences bring in a certain presupposition. Thus (26a) presupposes that its complement is true. Yet the sentence could readily be used in a conversational context that does not satisfy this presupposition. Perhaps the whole point of uttering (26a) is to let it be known that parents should not bring their kids along. Similarly, (26d) might be used to give directions to a person who up to that point had no idea that there are at least three brick houses down the street from the post office, which is a presupposition for the sentence by virtue of the underlined definite description. The same goes for the other examples in (26).

What do we say here? I am not at all sure we want to say that, in these cases, a sentence has been used infelicitously. I am sure that there is no advantage in saying that sentences like (26A) sometimes do and sometimes do not presuppose their complements. A notion of "part-time presupposition" is not going to help. On the contrary, had we defined presupposition as a relation between a sentence and its speaker, we would be tempted to talk about some presuppositions being optional.

I think the best way to look at this problem is to recognize that ordinary conversation does not always proceed in the ideal orderly fashion described earlier. People do make leaps and shortcuts by using sentences whose presuppositions are not satisfied in the conversational context. This is the rule rather than the exception, and we should not base our notion of presupposition on the false premiss that it does not or should not happen. But granting that ordinary discourse is not always fully explicit in the above sense, I think we can maintain that a sentence is always taken to be an increment to a context that satisfies its presuppositions. If the current conversational context does not suffice, the listener is entitled and expected to extend it as required. He must determine for himself what context he is supposed to be in on the basis of what was said and, if he is willing to go along with it, make the same tacit extension that his interlocutor appears to have made.[11] This is one way in which we communicate indirectly, convey matters without discussing them.

When we hear a sentence such as (26a), we recognize that it increments

contexts which entail that children are not permitted at commencement exercises. These are the only contexts that satisfy the presuppositions of (26a). So if we have not realized already that we are supposed to be in that kind of context, the sentence lets us know that indirectly. Perhaps the whole point of uttering (26a) was to make us conclude this for ourselves so that we would not have to be told directly.[12]

One must be careful not to confuse presuppositions with features of contexts that satisfy those presuppositions. Consider a sentence such as (27), which is a modified version of an example discussed by Lakoff (1971).

(27) John called Mary a Republican and then she insulted him back.

Because of the word *back*, the second conjunct of (27) presupposes that John has insulted Mary. The principle (17) tells us that this presupposition ought to be satisfied by the corresponding local context. In this case, the local context consists of the initial context for (27) incremented with the logical form of "John called Mary a Republican". Let us suppose that this context in fact satisfies the presupposition that John has insulted Mary, and that the initial context by itself would not satisfy it. This state of affairs could come about in several ways. The most obvious one is that the initial context entails that calling someone a Republican constitutes an insult.

Note that there is nothing in (27) which presupposes that "Republican" is a dirty word. It is not a necessary feature of every context that satisfies the presuppositions of (27). But there are some contexts in which the presuppositions of (27) are satisfied only because of it. Sometimes we can exploit this fact by uttering (27) in a context which does not satisfy its presuppositions. In that case we expect the listener to notice what extension we have in mind. This is similar to what can be done with the examples in (26), except that here the piece of information that is passed along under the counter is neither presupposed nor entailed by any part of (27).

As a final example, consider a case of the kind first discussed in Liberman (1973).

(28) Bill has met either the King or the President of Slobovia.

The two disjuncts that constitute (28) have conflicting presuppositions: Slobovia is a monarchy/Slobovia is a republic. Yet, (28) as a whole is not contradictory. It seems to assert that Bill has met the Slobovian Head of State and indicates that the speaker does not know much about Slobovia. What sort of context does it take to satisfy-the-presuppositions-of (28)?

Assuming that the condition for "or" is symmetric (see ftn. 5 above), we find that, according to our principles, (28) can be admissible at least in contexts which entail the logical forms of the three sentences in (29).

(29) (a) Slobovia is either a monarchy or a republic.
(b) If Slobovia is a monarchy, Bill has met the King of Slobovia.
(c) If Slobovia is a republic, Bill has met the President of Slobovia.

Such a context can satisfy the presuppositions of (28) for the following reason. By incrementing it with the negation of the first disjunct, "Bill has not met the King of Slobovia", we get a context which entails that Slobovia is a republic, which is what the second disjunct presupposes.

By incrementing the original context with the negation of the second disjunct, we get a context which entails that Slobovia is a monarchy, which is a presupposition for the first disjunct. Given that both constituent sentences in (28) are admissible in their respective local contexts, (28) as a whole is admissible.

If our way of looking at presuppositions is correct, it should be in principle possible to utter (28) to someone who has never even heard of Slobovia and leave it up to him to conclude that the speaker assumes (29). It seems to me that this is a desirable result.

In this paper I have argued that a theory of presuppositions is at best looked upon as a theory of constraints on successive contexts in a fully explicit discourse in which the current conversational context satisfies-the-presuppositions-of, or let us say from now on, *admits* the next sentence that increments it. I have outlined a recursive definition of admittance, based on the assumption that we can give a finite list of presuppositions for each simple sentence. In this approach we do not need an explicit projection method for assigning presuppositions to complex sentences. A theory of presuppositions of the kind advocated here attempts to achieve both less and more than has been expected of such a theory: less in the sense that it is not a theory of how ordinary discourse does or ought to proceed; more in the sense that it tries to explain some of the principles that we make use of in communicating indirectly and in inferring what someone is committed to, although he did not exactly say it.

FOOTNOTES

[1] There is some question over whether this notion of presupposition is properly labeled "pragmatic". For Stalnaker (1972, 1973), pragmatic presupposing is a propositional attitude of the speaker. However, I will follow Thomason (1973) and others who would like to reserve the term "presupposes" for relations (semantic and pragmatic) between sentences. The idea that it is important to distinguish in this connection between surface sentences and their logical forms is due to Lakoff (1972, 1973).

[2] Peters has pointed out to me that, under certain conditions, (4a) is equivalent to the following projection principle.

$$P_{\text{if A then B}} = P_A \cup \{\ulcorner A \rightarrow C \urcorner : C \in P_B\}$$

Peters' principle has the advantage that it assigns the same set of presuppositions to "If A then B" irrespective of any context. Note that this set is not a subset of $P_A \cup P_B$, as required by my initial assumption in (2). Peters' principle says that, for each presupposition of B, "If A then B" presupposes a conditional with that presupposition as the consequent and the logical form A as the antecedent. In addition, "If A then B" has all of the presuppositions of A. I realize now that some of the complexity in (4a) comes from trying to state the principle in such a way that (2) holds. If this is not worth doing, Peters' way of formulating the rule is superior to mine. However, in the following I will argue that we can just as well do without any explicit projection method at all, hence the choice is not crucial.

[3] It appears to me that the only contribution *too* makes to the meaning of a sentence is that it introduces a presupposition whose form depends on the sentence as a whole and the particular constituent *too* focuses on. If this is so, there is no reason to assume that *too* is represented in the logical form of the sentence. As far as the truth conditions are concerned, "Nixon is guilty too" seems equivalent to "Nixon is guilty", therefore, it is possible to assign the same logical form to them. The same point has

been raised in Lakoff & Railton (1971) with regard to two-way implicative verbs, such as *manage*, whose only function also seems to be to bring in a presupposition.

[4] In simple cases, incrementing a context consists of adding one more logical form to it. If the context entails the negation of what is to be added to it, as in counterfactual conditionals, other changes are needed as well to keep the resulting set consistent. This is a difficult problem; see Lewis (1973) for a general discussion of counterfactuals.

[5] It is possible that the principle for disjunctions, and perhaps that for conjunctions as well, should be symmetric. This depends on how we want to deal with sentences like "Either all of Jack's letters have been held up, or he has not written any" (see Karttunen 1973a, ftn. 11). A symmetric condition for "or" would read as follows:

X satisfies-the-presuppositions-of "A or B" if $X \cup \{\neg A\}$ satisfies-the-presuppositions-of "B" and $X \cup \{\neg B\}$ satisfies-the-presuppositions-of "A". For "and", substitute "A" for "¬A" and "B" for "¬B".

[6] The same holds in case we choose Peters' principle (see ftn. 2) over (4a). In demonstrating this, what we prove equivalent to (14) is not (11), of course, but that $\ulcorner A \supset C \urcorner \in P_B \not\subseteq E_X$. This equivalence follows straightforwardly from the fact that $\ulcorner A \supset C \urcorner \in E_X$ just in case $C \in E_{X \cup A}$.

[7] Lakoff has pointed out to me that a notion of local context is also needed for transderivational constraints that make the well-formedness of derivations in which a certain transformation has applied dependent on the context. In compound sentences, it is the local context these constraints must refer to, not the overall conversational context.

[8] One of the mistakes in Karttunen (1973a) was the claim that verbs of saying and propositional attitude verbs are all "plugs".

[9] Since ordinary negation is a sentential operator of type III, it also follows from (19) that a context satisfies-the-presuppositions-of "Nixon won't stop protecting his aides" just in case it satisfies-the-presuppositions-of "Nixon will stop protecting his aides". This is an important fact, but there is no need to make it part of the definition of pragmatic presupposition, as Thomason (1973) does, presumably for historical reasons because the semantic notion of presupposition is traditionally defined in that way.

[10] It is implicit in this treatment that every individual's beliefs are considered to be closed under entailment. I am not sure whether this is a defect.

[11] Many things can of course go wrong. First of all, the listener may refuse to go along with the tacit extension that the speaker appears to be suggesting. In case of the classical example: "Have you already stopped beating your wife?" he may have a good reason to balk. The listener may also be unable to comprehend what tacit extension of the current context the speaker has in mind. Some types of presupposition are especially unsuited for conveying anything indirectly. For example, "Nixon is guilty too" is not a good vehicle for suggesting that Agnew is guilty, although the presuppositions of the sentence are satisfied in all contexts where the latter is the case. Finally, the listener may extend the context in some way other than what was intended by the speaker. To what extent we actually can and do make use of such shortcuts depends on pragmatic considerations that go beyond the presuppositions themselves.

Note also that there are certain expressions in current American English that are almost exclusively used to convey matters indirectly, hence it is a moot question whether there is anything indirect about them

any more. One is likely never to hear "Don't you realize it's past your bedtime" in a context entailing that the addressee ought to be in bed.
[12] I owe this example to an official MIT bulletin about the spring 1973 commencement.

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Where Pragmatics Fits In*

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The paper that I read in Austin in the spring of 1973 (Thomason 1973) attempts to lay the foundations of a pragmatic theory able to deal with notions like implicature and presupposition. It was tentative and, in several important respects, unsuccessful. Though I'm still willing to distribute it privately, I'd be embarrased to see it in print. In the present note I set myself the lighter task of describing the conditions that I feel such a theory must meet. Pointing the way is always easier than going the distance.

I believe it's useful to divide the study of languages up into Charles Morris' three divisions: syntax, semantics, and pragmatics.[1] Work subsequent to Morris' writing has greatly developed the theories of syntax and semantics, though much of this work has taken place in isolated disciplines--a turn of events that Morris would have deplored. Recently, however, many linguists and logicians have become interested in unified theories of the syntax and semantics of natural language.

There is still a great deal of room for alternative approaches to this program. Coming to it as I do, from the logical side, I tend to be more conservative in my approach to the autonomy of syntax than many linguists.[2] Within limits (for instance, I allow certain arguments from semantic to syntactic ambiguity), I would like all syntactic conclusions to be supported by syntactic arguments.

Syntax should be generative, and can take many different forms; the one that I have been working on is due to Richard Montague. Semantics should be model theoretic. It involves the characterization of model structures, which represent the subject matter of the language under investigation, or at least those features of this subject matter that are needed to account for semantic relations like truth and denotation. Given such a structure, semantic theory must stipulate (1) what types of semantic values in the structure are associated with each syntactic category of the language, and (2) how semantic values are determined for each analyzed expression of the language,[3] given an assignment of appropriate semantic values to lexical expressions. The second task is performed by laying down semantic rules showing how each syntactic rule of the language affects semantic interpretation.[4] In other words, it amounts to explaining how meanings of syntactic complexes will depend on the meanings of their parts.[5]

Two points. First, the "meanings" that are involved here are literal ones. The semantic value of a sentence, for instance, will be some sort of

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representation of the conditions under which it is true, when construed literally and legalistically. Even though something is often (or even always) read into a sentence when it is used (as it is usually read into a use of *Someone dented my fender* that the person who did the denting was not the speaker), this need not be built into its semantic interpretation. Second, a methodological point: the proper medium for both syntactic and semantic theory is mathematics. Of course, we're dealing with applied mathematics, and syntactic and semantic inquiry will be oriented toward the data. The employment and interpretation of data can preoccupy researchers in both fields. But the standards of rigor are not those that apply in, say, literary criticism. If a theory is presented so vaguely that it isn't clear how to make it mathematically precise, it's appropriate to ask how this can be done. And if no answer is forthcoming, the theory is in trouble.

The status of pragmatics is much less clear; if such a discipline exists at all, it is very undeveloped. The point I want to make, I suppose, is that this is unfortunate from the viewpoint of practitioners of syntax and semantics. To this I'll add some suggestions relating to the foundations of pragmatics. In particular, let me begin by proposing that--at least for the moment--pragmatics should concentrate on implicature,[6] the process whereby meanings are "read into" utterances.

Though "pragmatics" is a fairly vague word, it's clear enough that this subject matter should be included under it. Implicature has to do with the interpretation that language users give to signs when they are used in communication. Several circumstances make this a particularly appropriate subject matter for contemparary pragmatics. First, Grice's work provides the starting point that is essential for any applied theory. It provides us with an organized view of a body of data, and with tools for classifying and interpreting it. Second, current work in syntax and semantics needs a theory in order to stand in a comfortable relation to evidence.

Suppose, to take only one type of example, that a sentence is judged anomalous. Its anomaly may be evident, but the proper interpretation of this fact will in general be a more complicated matter. Often the data itself will give us no way of telling whether, for instance, the anomaly is syntactic or semantic, and the best explanation is the one that is easiest--the one that leads to the simplest combined theory. And as long as the anomaly is explained in one place or the other, there has been no evasion of the duty to explain it. On the other hand, it would be less satisfactory to pass the explanation on to a discipline that isn't well enough developed so that its theories are clearly compatible with some evidence and incompatible with other. This is the trouble with pragmatics. Even if the phenomenon in question were best dealt with at the pragmatic level--a syntactic or semantic explanation would be much messier--there is as yet no way to separate this case from the one where it has simply been discarded, labeled "pragmatic" because it is recalcitrant. In other words, no way of keeping honest.

Now, this is not a serious problem as long as there aren't many cases where the absense of a pragmatic explanation is hurting syntax and semantics. But I suspect that there are many more such cases than you would think. Presupposition is one, but since people are becoming aware of the relevance of Grice's work to this topic, I will mention some others.

One is the notion of topic. A number of transformations (passivization, for example, and topicalization) change the topic of a sentence: *John cooked the dinner* is likely to be about John, *The dinner was cooked by John* about the dinner. But the semantic theory will be greatly simplified if such transformations leave semantic interpretation unchanged. A possible solution, acceptable to those who reject the autonomy of syntax, would be to build some representation of topic into deep structures. This only postpones the real semantic problem, however, which concerns the model theoretic representation

of topic. If deep structures differing as to topic are alike in model theoretic representation, they are synonymous, and the motive for introducing them is undermined. But if they differ, the model theory must be adjusted to account for the difference. I see no reasonable way to do this using available techniques; this is not the kind of problem they are designed to handle. If you take seriously the logical part of the program I sketched earlier, this should strike you as a real dilemma.

The problem could be solved by assigning topic to the pragmatic component. Some theory would be required of topic as a feature of contexts of utterance; this would be determined by such things as previous discourse and the participants' mutual understanding of what is interesting to each other and pertinent to the purposes of the conversation. *The dinner was cooked by John* would then have the same truth conditions (and hence, the same semantic representation) as *John cooked the dinner*, but its use would be inappropriate in contexts in which John, but not the dinner, is the topic. This would then explain, for example, the anomaly of *John is late getting here because the dinner was cooked by him.* This can only be made to sound decent by imagining that the dinner is a topic of conversation as well as John. I find such an account of topic so natural that the inability of model theory to deal with it seems welcome. It forces us to seek an explanation in conditions of use, which all along was the inevitable place to look.

Briefly, now, a few other instances in which a pragmatic theory might help to simplify syntax and semantics.

(1) *clefting:* we can say that *What John ate was beans* has the same semantic interpretation as *John ate beans*, but is assertable only in contexts where it is understood that John ate something.

(2) *nonrestrictive relative clauses and parentheticals: John, who was hungry, ate beans* and *John, I believe, ate beans* could both be derived by transformations from the same source as *John ate beans.* We can say that these sentences are all alike in their truth conditions (not as implausible a conclusion as it may seem at first), but that the first implicates that John was hungry, while the second implicates that the speaker is not sure of his evidence.

(3) *demonstrative determiners:* phrases like *this elephant* can be treated as having the same semantic content as *this.* Though reference to an elephant is implicated by an utterance using *this elephant*, it will not be part of the semantic interpretation of *this elephant.* Among other things, such a theory explains why *This elephant is not clean* doesn't have a reading equivalent to *Either this is not an elephant or this is not clean.*

(4) *constraints of "nonidentity" on the deletion of noun phrases in certain transformations:* to take Rosenbaum's example,[7] such constraints would explain the anomaly of *I said for me to go.* Now, constraints on *identity* of noun phrases can be stated syntactically in terms of indices that are attached to noun phrases in deep structure.[8] But conditions of "nonidentity" cannot, for syntactic identity of index is a necessary, but not a sufficient, condition of semantic coreference. Note, for example, that *John said for Bill's father to go* is just as anomalous as Rosenbaum's example, in a context where it is understood that John is Bill's father. The kind of "nonidentity" that is required here is pragmatic, not syntactic. It would be a happy solution to this problem if we could have a theory stating that utterances of the form *a said for b to go* implicates that *a* is not the same as *b.*

What I've said so far creates a certain amount of tension. I've tried to show there is a real need for a pragmatic theory of implicature, but continuity of method between syntax, semantics, and pragmatics requires a form for the theory of implicature that is not met by existing work in the area. And maybe there is reason to be skeptical about whether it can be met

or not.

Perhaps the tension can best be brought out by contrasting Morris' conception of pragmatics with Montague's, in Montague (1974). Morris viewed pragmatics as belonging to sciences such as biology, psychology, and sociology. Presumably it would use the methods current in these sciences and would deal generally with topics involving the relationships of sign-producing and sign-interpreting organisms to signs. Montague, however, viewed pragmatics as a branch of applied mathematics; in form his pragmatics is hardly distinguishable from model theoretic semantics. In content, he viewed it as dealing with *indexical (deictic, demonstrative)* constructions. Morris' account is what one would expect, given the content of pragmatics. Montague's much narrower account (so narrow that it isn't clear to me whether it ought even to be called "pragmatics") represents the best that has been accomplished under the condition that a proper theory must be capable of being made mathematically precise.

Given the present state of the biological and social sciences, I see little hope that their application can help to develop a useful theory of implicature. (I mean, of course, "useful in the present context": useful in explaining the kinds of examples that must be explained in order to maintain a proper balance between syntax, semantics, and pragmatics.) Also, I agree with Montague that the gains that have resulted from conceiving of syntax and semantics as mathematical sciences justify us in requiring the same of pragmatics.

My problem, then, is to develop a mathematical model of language use that will permit the explanation of a reasonable portion of Grice's phenomena. This is what I tried to do in Thomason (1973). The model there, which I still accept in many respects, begins with Montague's notion of a *context of utterance*. A context of utterance is a structure in relation to which sentences are assigned semantic values. Montague thought of contexts of utterance as containing only the information required to interpret indexicals; in a language whose only indexicals were *I* and *now*, for instance, a context of utterance would consist of a person and a time. Following a suggestion of Stalnaker's (1972) and (1973), I proposed that what is mutually understood, or presumed, be built into contexts of utterance.[9] To be more specific, part of each context of utterance is a set of possible worlds; a sentence is presumed true relative to a context if the sentence is true in each of these worlds. [Possible worlds belong to the underlying semantic theory; see, for example, Lewis (1972) and the introduction to Thomason (1974).] I also introduced a relation of acceptability between sentences and context of utterance. This notion would be defined in part through lexical conditions (such a lexical condition, on *this*, would ensure that a sentence using *this elephant* is acceptable only in contexts of utterance where the phrase is presumed to name an elephant), and in part through general principles corresponding to Grice's maxims (e.g., a sentence should not say less than is required by the context). The fact that *What John ate yesterday was beans* implicates *John ate something yesterday* is then explained by showing that the former sentence is unacceptable in all contexts in which the latter is not presumed true.

When I wrote the paper, it seemed to me that the chief problems in developing this model would come in fleshing out the notion of acceptability. I felt--and still feel--that one can go quite far in explaining Grice's "conventional implicatures" by means of lexical constraints on acceptability, but that the "conversational implicatures" are more difficult. Difficulties come up in explaining them that parallel problems logicians have been unable to solve. Since writing it, however, I've come to believe that the role played by presumption in the theory represents an untenable oversimplification, and I've not yet succeeded in replacing it with anything that seems satisfactory.

An account of implicature, then, would make possible a much simpler syntax and semantics than we could otherwise be content with. But to be usable, this account must be a theory. As yet, there is no such theory, though some suggestions have been made that might prove useful in developing one.

FOOTNOTES

[1] See Morris (1938). The philosophical style and the conception of semantic theory are out of date, but I think most logicians would still agree with the general orientation.

[2] It doesn't make much sense to speak of autonomous syntax in logic, where syntax is artificial. But logicians are used to the idea that the construction of syntactic systems should precede semantic interpretation, so that semantic notions such as reference, truth, and validity can't enter into the definition of syntactic structures. They are also used to giving *semantic* (i.e., model theoretic) explanations of things like synonymy, rather than syntactic explanations involving the notion of deep structure. These habits may help to explain sympathy for the autonomy of syntax.

[3] An analyzed expression is an expression together with a syntactic analysis showing how it is constructed by means of syntactic rules.

[4] For a transformational syntax with meaning preserving transformations, the nontrivial part of this task will concern the phrase structure rules.

[5] For further explanations of this approach to semantics, see the introduction to Thomason (1974), and Lewis (1972).

[6] The term "implicature" is due to Grice (1967).

[7] See, for instance, Rosenbaum (1967), p. 68, and Perlmutter (1970).

[8] Following Montague, I would prefer to attach these indices only to pronominal forms and have a rule of quantification that combines, e.g., *every woman* with *He$_2$ seeks a unicorn that loves him$_2$* to yield *Every woman seeks a unicorn that loves her*. This simplifies the task of semantic interpretation. But the indices can be attached to noun phrases, as long as it is understood that the interpretation of *Every politician$_2$ hates every politician$_2$* is that every politician hates himself. The surface form *Every politician hates every politician* should be derived from forms such as *Every politician$_2$ hates every politician$_3$*.

[9] Stalnaker uses "presupposes" to speak of what is mutually understood in a context of utterance. I changed this in order to reserve "presuppose" for a relation between sentences.

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